

George Rector (above), famed chef and host at the A. & P. Carnival, gestures his approval of a salad.



Mrs. E. Stewart does a family's washing every day in this G-E exhibit at the Electrical building.



These champion 4-H club members have left their farms to see exhibits like these at the Fair.



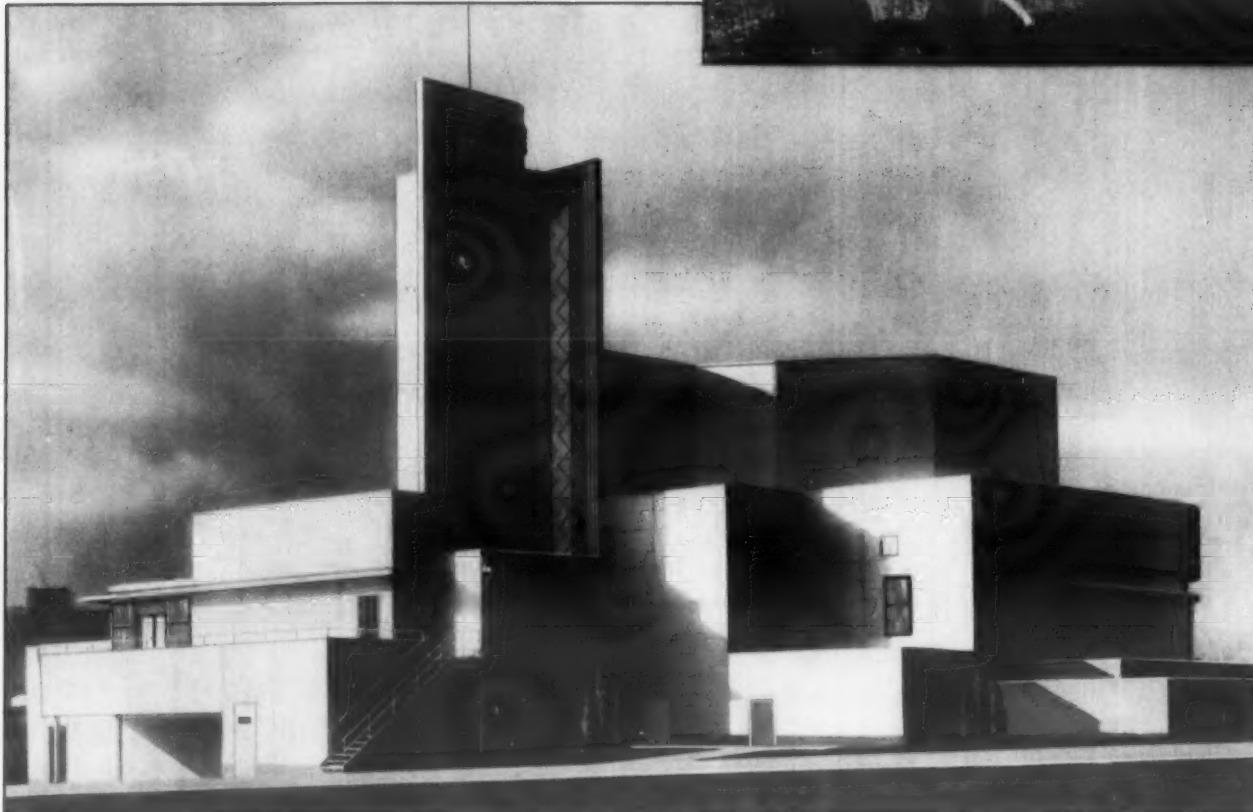
Wizard of Oz figures at the right are located on Enchanted Island, children's paradise at A Century of Progress.



L. A. Gliatto (above) makes new kitchens out of old at the G-E Kitchen Institute.



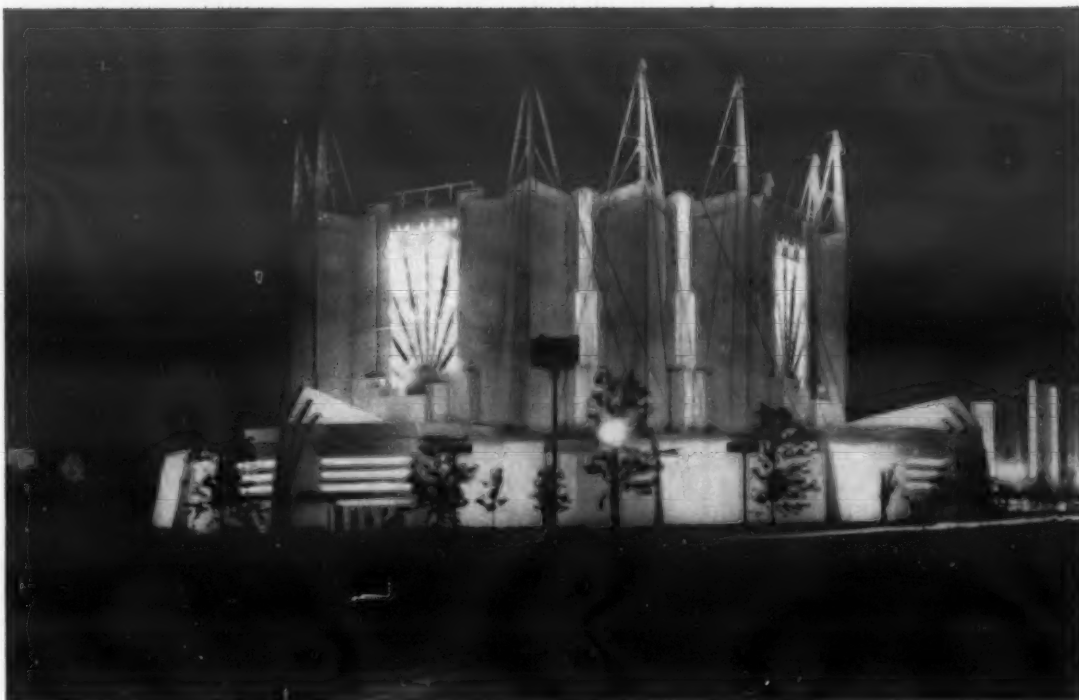
Harry S. New (right), former Postmaster General, is now U. S. Commissioner to the Fair.



Dairying's evolution is spectacularly portrayed in the white Dairy building (above).

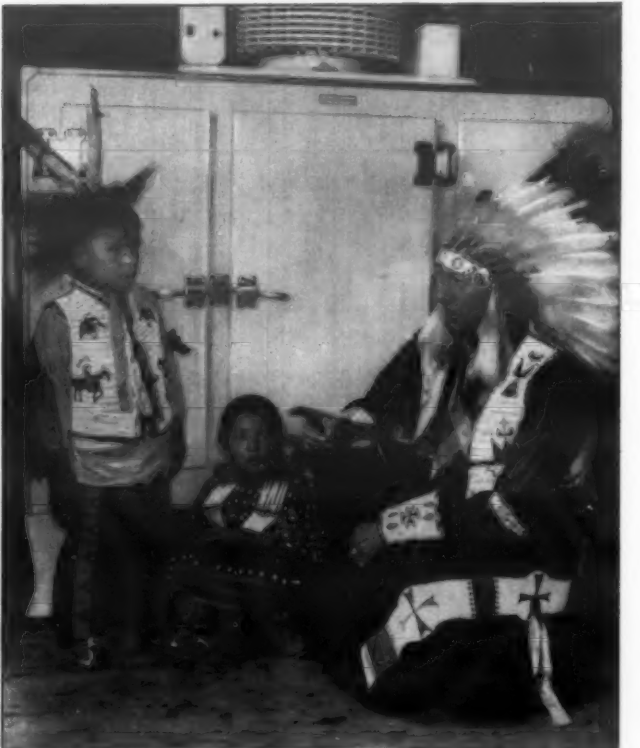


Most discussed structure at the exposition is the Travel & Transport Bldg. with its dome suspended. (right).



These visitors (right) to a G-E kitchen exhibit at the Fair came all the way from Siam.

Chief Yellow Thunder (below) unfolds past glories to Little Cloud and Juanita.





# REFRIGERATION NEWS

Registered U. S. Patent Office

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS.

VOL. 9, No. 13, SERIAL NO. 227  
ISSUED EVERY WEEKCopyright, 1933, by  
Business News Pub. Co.

DETROIT, MICHIGAN, JULY 26, 1933

Entered as second-class  
matter Aug. 1, 1927IN TWO PARTS, PART ONE  
TEN CENTS PER COPY

## INDUSTRY SETS 6-MONTHS' SALES RECORD

### DuPONT LACQUER PATENT VALID, COURT DECIDES

#### Higher Court Reverses District Judge on Flaherty Patent

NEW YORK CITY—Reversing the decision of the district court which declared duPont's patent on low-viscosity lacquers invalid (*ELECTRIC REFRIGERATION* News, Dec. 28, 1932), Judge L. Hand of the U. S. Circuit Court of Appeals has just ruled that the patent in question (reissue No. 16,803) is valid.

This decision marks a new turn in the extended litigation between the Glidden Co. which, with a number of other lacquer manufacturers, refused to accept duPont's offer of a license to make lacquer under E. M. Flaherty's patent.

The duPont company had previously drawn up licensing agreements with a number of lacquer producers who had agreed to pay a royalty of four cents per gallon under a plan which was designed to bring about stabilization of business forces in the lacquer industry.

The probable effects and operating program under Judge Hand's reversal of the lower court's decision have not yet been made public by duPont officials.

The patent was issued to E. M. Flaherty on May 24, 1927, as No. 1,629,999, assigned to E. I. duPont de Nemours & Co., and reissued on Nov. 29, 1927, as reissue patent No. 16,803.

Concurring with Judge Hand's decision were Judge A. N. Hand and Judge Chase of the circuit court.

Extracts of the new court opinion follow:  
"The base of the lacquer in question is nitro-cellulose, a derivative of cotton, which when dissolved in proper diluents may be sprayed or brushed upon the object to be varnished, or made to adhere to its surface by dipping.

"As the solvents are evaporable, they disappear with exposure, leaving a coating upon the object which is hard, tough, and adhesive, with a smooth glossy finish. The thickness of the coat obviously depends upon the solids left after the solvents have evaporated, principally the nitro-cellulose. The greater the proportion of this to the solvents, the thicker the coat, and an initially thick coat is

(Concluded on Page 16, Column 5)

### LEONARD WILL INCREASE ALL PRICES ON SEPT. 1

DETROIT—Due to the mounting costs of raw materials, prices on the entire line of Leonard electric refrigerators will be advanced on Sept. 1, R. I. Petrie, general sales manager of the Leonard Refrigerator Co. here, announced July 21.

Lowest-priced model in the line will be advanced from \$99.50 to \$112, installed, plus freight, while other models will undergo proportionate price revisions, Mr. Petrie said. The lowest-priced model is thus returned to the figure at which it sold in March.

"Last March, the company cut prices to new, low levels," he explained. "There has since then been only one slight advance, in spite of steadily rising commodity prices. This second increase is made necessary by the higher cost of raw materials."

### July Kelvinator Sales Already Past July, '32

DETROIT—Kelvinator Corp. announced on July 19 that July shipments up to that time had more than doubled those for the entire month of July, 1932.

"Although our heavy production season arrived one month later than usual this year, it has already carried three months beyond the normal point," said H. W. Burritt, vice president in charge of sales.

### Merger of Grunow & U. S. Radio Completed

CHICAGO—Merger of Grunow Corp. with the U. S. Radio & Television Corp. of Marion, Ind., has been completed, and the new organization has been named the General Household Utilities Co., according to Grunow officials. Stockholders of the Marion company met July 12 to approve the merger and authorize necessary changes in capitalization of the combine.

William C. Grunow, president of Grunow Corp., will hold that position in the new organization, while J. Clarke Coit, president of U. S. Radio, will serve as chairman of the board of the merged concerns. Headquarters of the company will be in Chicago.

The new firm will introduce Grunow radios soon and, sometime later, Grunow washing machines. Manufacture of Apex and Gloritone radios, two U. S. Radio & Television brands, will probably be continued by General Household Utilities—at least until present contracts with distributors have expired.

Following completion of the merger, 146,850 additional shares of capital stock were issued with the approval of the Chicago Stock Exchange—bringing the total listing to 299,455 shares.

Financial data given the Stock Exchange at the time of the extra stock issue showed that Grunow Corp.'s net sales during the three months ending May 31 totalled \$1,586,522, with a net income of \$48,646. The reports showed that for the 10 months ending May 31, U. S. Radio & Television Corp. had net earnings of \$2,792, with current assets on that date of \$1,839,919 against current liabilities of \$308,398.

### KELVINATOR TO RAISE BASE PRICE TO \$112

DETROIT—Effective Sept. 1, retail prices of all Kelvinator household refrigerators will be revised upward, bringing the base price of the line to \$112, installed, plus freight, according to an announcement made last week by George W. Mason, president of Kelvinator Corp.

Amount of price increases on other models of the Kelvinator line has not yet been definitely determined, said Mr. Mason. This will be the second upward price revision made by the company this season—the first having been made June 28 when raw material prices increased substantially.

The September increase will bring the retail price of the lowest-priced model to where it was before March 21, when Kelvinator announced its price reduction with the "40-day clause."

To promote sales of its refrigerators before the September revision is made, the company is using key city newspapers and magazines and other advertising media to notify prospective purchasers that the price increase is on its way.

In connection with his announcement of the price change, Mr. Mason said, "Our employment now is at a higher point than at any similar period in the organization's 19 years. Because of our decision to allow more than a month before the higher prices are put into effect, factory production has been set high to enable dealers to obtain sufficient stock to meet the unprecedented demand for household refrigerators which is being noticed this year."

### Servel Increases Wages Of Factory Employees

EVANSVILLE, Ind.—To cooperate in the national recovery program, Servel, Inc., here has granted a 5 per cent raise in wages to factory workers, according to F. E. Sellman, vice president of the company. The increase does not include office or semi-office employees.

Servel factory employees have elected a workers' council to cooperate with the management in applying regulations of the National Industrial Recovery Act, Mr. Sellman stated last week.

### 693,000 UNITS SHIPPED BY ALL MANUFACTURERS

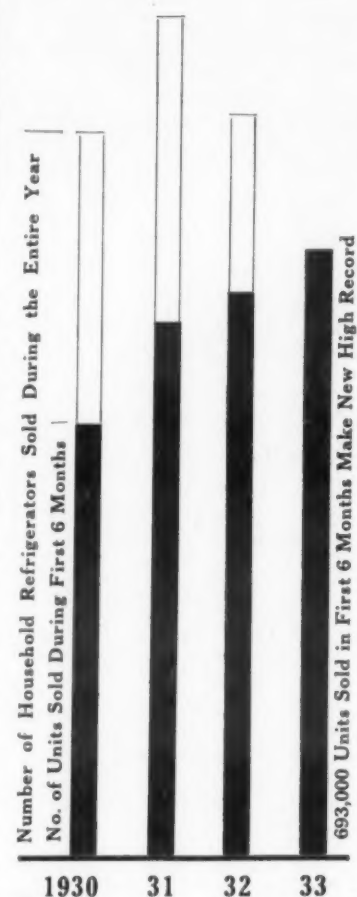
#### New Monthly Record Reached in June, Stocks Down

DETROIT—June factory sales of household electric refrigerators set a new monthly record of 219,400, bringing the total sales for the first six months of the year to 693,000 which is well above the six months' total for any other year in the industry's history.

These figures are based on releases from the Refrigeration Division of the National Electrical Manufacturers Association which report sales of 175,550 by the 12 member companies during the month just past. The all-industry figure of 219,400 for June is based on the assumption that non-Nema companies account for 20 per cent of the total business—an assumption which appears fair, judging from news reports of non-Nema companies.

Despite record shipments in May and June of this year, factory and dealer stocks are low as compared with stocks in June of 1932, according to Louis Ruthenburg, consultant to the Nema Refrigeration Division. Distributor and dealer inventories in June totalled \$7,527,295 as compared with \$10,373,423 in June, 1932; while factory stocks this June were valued at \$8,715,005 as compared with \$16,255,137 in June, 1932.

### Graph Shows Gain Over Past Years



### 4-Year Analysis of Monthly Sales

	1930	1931	1932	1933
January Totals	34,000	22,700	39,400	30,400
Nema only	28,356	18,917	31,537	16,361
February Totals	51,000	54,700	56,600	39,000
Nema only	42,362	45,508	42,109	30,422
March Totals	84,500	96,600	91,500	63,300
Nema only	70,291	80,350	73,215	49,823
April Totals	121,000	159,300	158,300	134,000
Nema only	100,500	132,414	126,620	107,182
May Totals	119,500	153,500	144,200	218,900
Nema only	98,621	127,671	116,348	175,119
June Totals	93,000	122,200	163,300	219,400
Nema only	77,174	101,492	130,607	175,550
First Six Months Totals	502,000	608,000	649,300	693,000
Nema only	417,304	506,517	519,426	554,417
July Totals	83,000	103,800	33,500	
Nema only	69,506	86,419	26,794	
August Totals	72,000	69,800	28,900	
Nema only	59,680	58,021	23,124	
September Totals	62,500	53,200	38,100	
Nema only	51,969	44,202	30,513	
October Totals	45,000	48,100	34,100	
Nema only	37,576	39,999	27,294	
November Totals	37,000	39,600	26,300	
Nema only	30,777	32,879	21,029	
December Totals	45,500	41,500	30,100	
Nema only	40,238	34,459	24,078	
Nema only, annual total	707,050	802,356	672,258	
Annual Totals	850,000	965,000	840,300	

### How Do You Like the Supplement With This Issue, Mr. Purdy?

1701A Green St.  
Harrisburg, Pa.  
July 24, 1933.

Editor:

Your *ELECTRIC REFRIGERATION NEWS* of July 19, 1933, was in two parts, one of which covered electric refrigeration in general, the other part entitled, "A Century of Progress Supplement." I noticed was devoted entirely to General Electric.

I wonder just why this was called "A Century of Progress Supplement" of your *ELECTRIC REFRIGERATION NEWS*. My opinion is that it is paid for advertising, and I do not think it is at all fair for subscribers to have to pay for the same.

I happen to be a Frigidaire selling man and I do like to see items in your paper as to Frigidaire and its progress. It also interests me to see other items on the advancement of competitive refrigeration, but if I ever receive another supplement to your weekly paper devoted so entirely to one machine I would like you to cancel my subscription.

JOHN J. PURDY.

P.S. If you would like I am per-

fectly willing to have you publish this letter in your next issue or the following of your *ELECTRIC REFRIGERATION NEWS*, but I have small hope of seeing the same in the next or any issue of your paper. I might add to the above letter that I am not the only one of the opinion that the supplement copy was paid for advertising.

Editor's Note: Frigidaire and General Motors exhibits and personalities at A Century of Progress are pictorialized in the rotogravure supplement to this issue of *ELECTRIC REFRIGERATION NEWS*.

Each of these rotogravure supplements devoted to A Century of Progress exposition features the exhibits of one manufacturer. Following is the schedule, as arranged to date:

July 19—General Electric  
July 26—Frigidaire  
Aug. 2—Westinghouse  
Aug. 9—Grunow  
Aug. 16—Norge

The two-page advertisements in each of these rotogravure sections are paid for by the advertiser at regular rates; the other six pages are NOT paid advertising.

### FINAL APPROVAL DUE THIS WEEK ON NEMA CODE

#### Refrigeration Division To Meet After U. S. Action

WASHINGTON, D. C.—The code prepared by the National Electrical Manufacturers Association to govern the electrical industry under the provisions of NIRA, as revised and amended at hearings held here last Wednesday and Friday under Deputy Administrator W. L. Allen, will probably be presented to Administrator Hugh S. Johnson and President Roosevelt for approval this week.

Immediately upon approval of the Nema code by the President, a meeting of the Refrigeration Division of Nema will be called to formulate a supplemental code which will cover trade practices in the electric refrigeration industry, according to G. M. Johnston, president of Universal Cooler Corp. and chairman of the Refrigeration Division of Nema.

Members of the Refrigeration Division of Nema and manufacturers who have applied for membership will be invited to this meeting.

The code as it now stands, ready for final approval, provides for a maximum work week of 36 hours for factory laborers, with a minimum wage of 40 cents per hour, unless the rate per hour for the same class of labor as of July 15, 1929, was less than 40 cents per hour, in which case the rate shall be the same as that paid on July 15, 1929, provided such rate of pay is not less than 30 cents per hour.

Limitations as to the number of work hours per week will not be strictly applied to branches of the electrical manufacturing industry in which seasonal or peak demand places an unusual and temporary burden for production or installation upon such branches.

Employees will be permitted to work as many excess hours as may be required by the necessity of the situation, with employers reporting each month to the Board of Governors on the number of such excess hours, and the ratio to the total number of working hours.

The minimum wage for all other employees, except commission salespeople, will be \$15 per week, and the maximum working hours for all other employees except commission salespeople, administrative and supervisory employees, shall be 40 hours per week. This so-called "white collar" provision

(Concluded on Page 16, Column 1)

### FRIGIDAIRE CONDITIONERS INSTALLED IN GOWN SHOP

DETROIT—To provide refrigerated and dehumidified air for the main floor, and in dressing and fitting rooms off the balcony of Russek's gown shop, 10 tons of Frigidaire air-conditioning has just been installed.

Russek's is one of Detroit's leading shops for women, and is located on Woodward Ave. where direct rays of the afternoon sun made inside temperatures excessive until the air-cooling equipment was installed. It is the first of its kind to be air conditioned in this city.

One of Frigidaire's new 10-ton condensing units provides refrigeration for two 3-ton store-cooling units and a floor-type cabinet on the main floor, and a floor-type cabinet cooler in the fitting room off the balcony, according to E. E. McEwan of the Frigidaire branch, who directed the installation.

Earl E. Sommers, member of the firm, states the efficiency of the mannequins and saleswomen has noticeably increased since the quarters were conditioned, and that their handling of patrons in hot and sultry weather is much more patient.

In the dressing and fitting rooms on the balcony, which used to be unbearably hot in the spring, summer, and fall, the atmosphere now is so cool that patrons do not have to wear armpit shields while trying on garments.



## BY GEORGE F. TAUBENECK ---

### Gas Industries Hall

Admission free

Developments in heating, cooking, and other uses of gas. Plumbing, air-conditioning, and household equipment are also included among the exhibits. LOCATION: South of Home Planning Hall.

### Travel and Transport Building

Admission free

Architects: John A. Holabird, Edward H. Bennett, and Hubert Burnham.

LOCATION AND DESCRIPTION: Between 31st and 25th St. entrances. The central part of this building is located under a huge dome, hung from cables in the manner of a suspension bridge, 125 ft. above the ground. It is said to cover the largest area in the world uninterrupted by supports. Joints in the construction allow for expansion and contraction as the temperature and snow load varies. A long rectangle stretching at right angles to the dome, in the rear, completes the building.

INTERESTING EXHIBITS IN THE DOME: A large crown containing four projection machines, mounted on a pillar in the center of the room, used for throwing motion pictures of the history of lubrication on the walls (Standard Oil Co.); old Number 9, the first railroad sleeping car; life-size latest model of Boeing monoplane; Rocky Mountain stage coach; covered wagon; horse and buggy; early automobile; Curtiss airplane; the John Bull train which was displayed at the 1893 Columbian Exposition, operating under its own power; aluminum Pullman cars (Pullman Co.); a complete oil well derrick in action; fire engine equipment (American LaFrance, and Foamite Industries, Inc.).

INTERESTING EXHIBITS IN RECTANGULAR SECTION: Cab of the Pennsylvania Railroad's largest locomotive; refrigerated milk tank car, refrigerated meat car, and dry-flow automatic unloading tank car (General American Tank Car Corp.); glass automobile, with machine parts working, illuminated by a colored electric fountain (Borg-Warner Corp.); largest electric engine in the world (Chicago, Milwaukee, St. Paul & Pacific Railroad); types of roadbed, ties, and track ballast; growth of airways, night travel, increase in air travel (Cooperative Exhibit of Air Passenger Lines).

OTHER EXHIBITS OF INTEREST: Helium car (Bureau of Aeronautics); full-sized replica of pilot house of modern ocean liner, and forecastle of sailing vessel (Bureau of Naval Steamboat Inspection); making of radio receivers, transmitters, and other apparatus and growth of the international amateur radio movement (Amateur Radio Exhibit Association); story of development of railway safety devices (American Steel Foundries); historical display of air brakes (Westinghouse Electric & Mfg. Co.); motor boats and outboard motors (Johnson Motor Co.); safety glass (Safety Glass Mfg. Association); use of trucks for transporting large amounts of money (Brinks Express Co.).

OUTDOOR AREA EXHIBITS: Presidential train of the Republic of Mexico, including a rare collection of jewels, the Alban gems (National Railways of Mexico); the "Royal Scot," British express train (London, Midland, & Scottish Railway); the air-conditioned Capitol Limited (Baltimore & Ohio Railroad); demonstration of mine rescue equipment (U. S. Bureau of Mines); new type gondola car (General Steel Castings Co.); a radio-controlled farm tractor, and other cultivating and harvesting machinery (International Harvester Co.); demonstration of trench digging equipment (Barber-Greene Co.); glass parking tower, housing 16 cars which pass up and down continually (Nash Motors, cooperating with Whiting Corp. and Westinghouse Electric & Mfg. Co.).

### General Motors Bldg.

Admission free

Architect: Albert Kahn.

LOCATION: Foot of 31st St., backed up against Lake Michigan. A 177-ft. tower surmounts the building, which is semi-circular in general outline. Names of the company's products appear at intervals around the exterior wall. The entrance hall, opposite the tower, runs between two large display rooms, each 18,000 sq. ft. in area.

EXHIBITS OF INTEREST: Complete automobile assembly plant in operation at rear of display rooms; display of General Motors Research laboratories; sculptured figures and groups representing phases of the automobile industry; air-conditioned theater where talking movies are given; complete display of General Motors products (including Frigidaire); a \$15,000 super-streamlined Cadillac V-16, in the highly artistic foyer.

## What to See At the Fair

This is the second installment of a brief summary of important exhibits at A Century of Progress exposition, the 1933 World's Fair in Chicago, and where to find them.

By no means a complete description of the Fair, this summary is intended as a time-saver for visitors who have only a week or less in which to see the exhibits.

Judging by the number of conventions, meetings, and contest prizes which are bringing refrigeration men to A Century of Progress, a sizeable portion of the industry will have visited the Fair before the summer's end.

### Chrysler Bldg.

Admission free

Products of Chrysler Motors.

LOCATION: North of Travel & Transport building.

EXHIBITS OF INTEREST: Tools made by Walter P. Chrysler when he was a mechanic, in a central glass display case; latest models of the corporation's cars, in circular section; demonstrations of tests for heat, cold, and water resistance of automobile motors; proving grounds, where endurance and speed tests, and free automobile rides are conducted; Barney Oldfield himself; school of body design; research laboratory, showing

new metal Oil-lite, which makes re-oiling unnecessary.

### Wings of A Century

Admission: Adults, 40 cents; children, 25 cents; boxes, \$1.00.

Pageant of the progress of transportation, presented by 200 actors, and showing 70 horses, 7 trail wagons, 10 trains, and other conveyances.

LOCATION: South of 31st St. entrance, on the lake side of the street. A large outdoor theater is used for the dramatization.

### Johns-Manville Bldg.

Admission free

Architect: Ely J. Kahn.

Constructed of Johns-Manville materials, to demonstrate sound-proofing, and heat insulation.

LOCATION: In Home and Industrial Arts Group.

FEATURED EXHIBIT is a 90x20-ft. mural by Leo Katz based on the four elemental forces which are controlled by Johns-Manville products—cold, heat, noise, and mechanical motion. It is painted on asbestos.

OTHER EXHIBITS OF INTEREST: Demonstration of heat and cold control through insulation; a modern office, in which the noise is checked by soundproofing; technical displays of packings and insulation.

### Administration Bldg.

Admission free

Architects: Holabird & Root, with Hubert Burnham and Edward Bennett.

The Administration building, headquarters of the Fair, is designed to show possible trends in industrial and office construction.

LOCATION AND DESCRIPTION. Just inside the grounds beyond the North Entrance, on the western side of Lief Ericson Drive. Shaped like a large E with the arms facing the lagoon, the building has its main entrance on Lief Ericson Drive. Two large figures by Alvin Meyer flanking the six pylons of the entrance represent Science and Industry, keynotes of the exposition. Largest part of the building is devoted to offices.

WHAT TO SEE IN THE BUILDING: In the large main entrance hall, is the world's largest photo-mural, showing the Fair grounds; on the second floor is the trustee's room, embodying the latest developments in office design, including a wedge-shaped trustee's table which enables all seated at it to see all others present with ease. The walls of the trustee's room are "papered" with a wood veneer which looks like heavy paneling and which is put on like wallpaper. The room is lighted by three motion picture projector lenses, the illumination coming through three tiny holes in the ceiling.

### United States Government Bldg.

Admission free

Housing displays of the work of the Federal Government.

LOCATION: On Northerly Island, across Science Bridge and opposite Hall of Social Science. The Federal building stands out because of its unique construction—three triangular fluted towers have been erected above the central dome, representing the three branches of the government—executive, legislative, and judicial. Forming a triangle on the side away from the lagoon, the Hall of States adjoins the U. S. Government building, signifying the essential harmony of state and federal government. Gardens and fountains fill the inner court.

EXHIBITS: Activities of government branches—Agriculture, Commerce, State, Interior, Navy, Labor, Treasury, War, Justice, Post Office, Smithsonian Institute, Panama Canal, Library of Congress, National Capitol Park and Planning Commission, Vet-

erans' Administration, National Advisory Committee for Aeronautics, Shipping Board, Government Printing Office; antiques, art objects, and natural products of Hawaii.

### Hall of States

Admission free

The states of the Union have each an exhibit section in this building, forming a "Parade of States." LOCATION: A V-shaped structure, making a triangle with the U. S. Government building, on the Lake Michigan side.

STATE EXHIBITS: Washington—agriculture, industries, and tourist attractions; Puerto Rico—sugar, coffee, and tobacco industries; Illinois—development of the state told in four divisions—mines and minerals, public welfare, public works, and the University of Illinois; New York—garden scene, bringing out beauties of Catskills, Adirondacks, Niagara Falls, and state parks; Iowa—recreational opportunities and state parks; Washington—Puget Sound display, also Mount Ranier, and development of mining and farming; Ohio—manufacturing and agricultural activities; North Dakota—bad lands, agricultural resources, mining of lignite coal, and tile, brick, and bentonite industry; Georgia—tropical flora, gold mining, marble, timber; California—redwoods, Catalina Island resources, tropical plants; Indiana—mural map showing highways and historical scenes, formal garden, paintings by local artists; Minnesota—industries, natural beauties, including upper Mississippi, North Woods, Ten Thousand Lakes; Texas—tropical flora, agriculture, industry; Missouri—Ozark cabin built in 1856, industries of state; South Dakota—mining, agriculture, model of Mt. Rushmore with miniature copies of figures Gutzum Borglum is sculpturing on the original, of Washington, Lincoln, and Theodore Roosevelt; Mississippi—industries, agriculture, winter resorts; Michigan—tourist facilities, miniature waterfall into pool alive with Michigan trout (air-conditioned display); Colorado—mining, agriculture, industry, beauties of the state; Florida—patio of a house, southern flora.

### Hall of Social Science

Admission free

The story of mankind from cave man times to the present day, including developments in economic, social, and educational fields.

LOCATION: At eastern end of Science Bridge, west of Sky Ride tower. The building can be distinguished by four sculptured pylons by Leo Friedlander, representing Indian gods of Fire, Light, Night, and Storm.

CENTRAL EXHIBIT is a contrasted picture of the American family in Colonial times and today. Life in the home and in the community then and now is compared.

ANTHROPOLOGICAL EXHIBITS OF INTEREST: City dumps of 1933 and 1893, showing different kinds of refuse in different periods; section of a European cave giving evidence of a civilization 50,000 years ago; Indian mounds and relics from Central Illinois; stratified village site, illustrating methods of archaeology and anthropology.

ECONOMIC AND SOCIAL EXHIBITS OF INTEREST: Explanation of the theory of money and taxation; structure of world trade; principles of immigration, showing some old world centers in the new world; problems of community life, such as transportation, housing, church and school, crime, social codes, recreation, sanitation, etc.; charitable organizations and their work; progress of education.

OUTSIDE AREA: Includes actual remains of ancient civilizations brought from their original locations. The Golden Temple of Jehol, the Mayan Temple, and the Indian Village contribute to the exhibits of anthropology.

### Hall of Religion

Admission free

Architects: Thielbar and Fugard

LOCATION AND DESCRIPTION: On the west side of the South Lagoon, just north of the Midway. The 400-ft. building contains a chapel for meditation, and a bell tower with chimes. An assembly hall is used for meetings, lectures, organ recitals, etc. At the eastern end, in an alcove, are six windows which will be placed in the Milan cathedral, Pittsburgh, when the Fair closes. They are the work of Charles J. Connick of Boston, and represent in beautiful colored glass treatment of Old Testament figures.

CENTRAL EXHIBIT is the Antioch chalice, in the center of the main octagonal rotunda. This beautifully sculptured silver cup is the oldest known eucharist vessel, and was discovered in Antioch, Syria. Around the walls of the rotunda are murals representing the eight great religions.

NOTEWORTHY EXHIBITS: Displays contributed by various religious organizations, emphasis being placed on the advancement of religion, religious education, hospital, and mission work; development of church architecture; religious art from countries of the world; the Catholic chapel car "St. Paul" (just outside the building).

## Modernistic Homes

Interior decoration: James S. Kuhne and Percival Goodman, Chicago and New York City.

Cost: \$15,000 without equipment.

### General Houses, Inc.

Admission free

Architect: Howard T. Fisher, Chicago

These houses are built as an example of quick assembly of prefabricated units in almost any combination.

Built by: General Houses, Inc.

Construction: Prefabricated units, frameless steel. One story, with flat roof.

Interior decoration: Kroehler Furniture Co.

Cost: \$4,500 without equipment.

### Lumber Industries House

Admission free

Architect: Ernest Grunsfeld, Chicago.

Built by: National Lumber Manufacturers' Association.

Construction: Wood, showing various uses of lumber in the houses. Has pitched roof.

Plan: Five rooms.

Interior decoration: Wolfgang Hoffmann, New York City.

Cost: \$4,500, without equipment.

### Masonite House

Admission free

Architects: Frazier & Raftery, Chicago.

Built by: Masonite Corp.

Construction: Masonite. Flat roof.

Plan: Two stories; first story—living room (12-ft. ceiling), dining bay in living room, 2 bedrooms, 2 baths; second story—den, and open and covered roof areas.

Interior decoration: Marjorie Thorsh, Chicago.

Cost: \$7,500, without equipment.

### "House of Tomorrow"

Admission 10c

Architect: George Fred Keck, Chicago

This is a "laboratory" house, an experiment to see how the public will react to radical departures in housing. Price has been no object in its construction.

Built by: Century Homes, Inc.

Construction: Circular glass house, built around central mast containing all utilities. Clear glass used in exterior walls, with shades for privacy.

Plan: Ground floor—airplane hangar and garage; main floor—living quarters, with deck terrace surrounding them; roof—solarium with deck terrace overhanging main floor.

Equipment: Advanced equipment of all types has been used, including an airplane, electrically controlled doors, concealed lighting, air conditioning etc.

Interior decoration: Irene Kay Hyman, Chicago.

### Rostone House

Admission free

Architect: Walter Scholer, Lafayette, Ind.

Built by: Rostone, Inc., and Indiana Bridge Co.

Construction: Made of Rostone (limestone and shale material). Prefabricated units. Flat roof.

Plan: One story with roof. Living quarters on first floor, glass enclosed solarium as part of roof deck.

Interior decoration: Thomas E. Smith, Chicago.

Cost: \$6,000, without equipment.

### Stransteel-Good Housekeeping House

Admission free

Architects: O'dell and Rowland, Detroit.

Consultant: Dwight James Baum, Good Housekeeping.

Built by: Stran-Steel Corp.

Construction: Steel frame construction enameled exterior walls. Roof flat.

Plan: Ground floor—living quarters; roof—recreation room and sun deck.

Interior decoration: Good Housekeeping Studio.

Cost: \$7,900, without equipment.

### Southern Cypress Mountain Lodge

Admission free

Built to show uses of cypress, by Southern Cypress Manufacturers' Association.

### W. & J. Sloane House

Admission free

This house primarily features elaborate interior decoration, rather than construction. A rear garden is sponsored by the Garden Clubs of America. Built by: W. & J. Sloane, New York City.

Plan: Living room with dining bay, gallery, 3 bedrooms, kitchen, servant's room, terrace.

Interior decoration: W. & J. Sloane.

### Glass Block Bldg.

Admission free

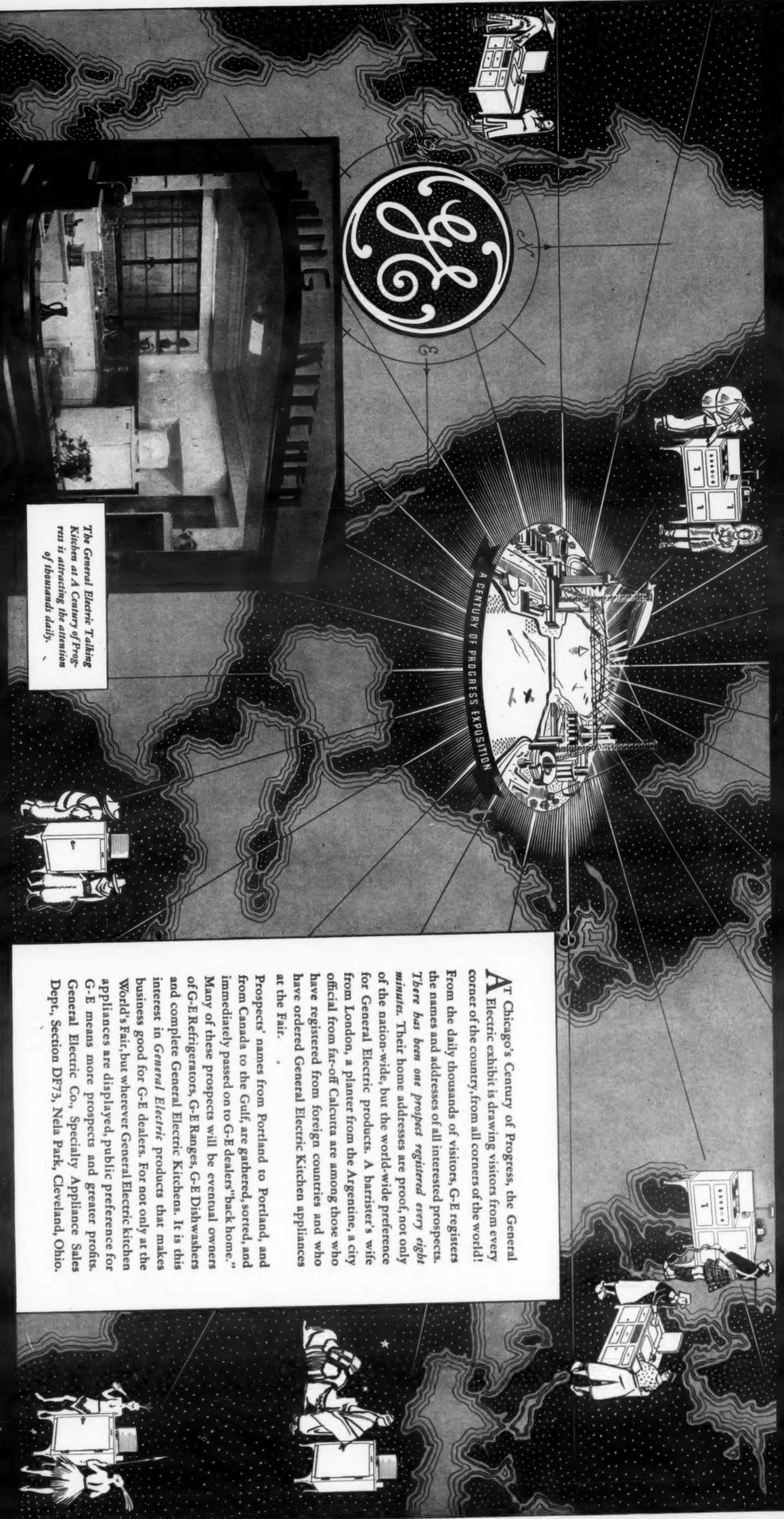
Landscape pavilion of the James W. Owen Nurseries, landscaper for the Home and Industrial Arts Group, built by Owens-Illinois Glass Co.

LOCATION: In Home and Industrial Arts section. Constructed of colored glass blocks, with a central shaft rising 50 ft. above the main part.

EXHIBITS: Garden equipment, furniture, odd flower specimens, and a display of the Owens-Illinois Glass Co.



FROM EVERY QUARTER OF THE GLOBE • FROM EVERY STATE IN THE UNION



The General Electric Telling Kitchen at A Century of Progress is attracting the attention of thousands daily.

At Chicago's Century of Progress, the General Electric exhibit is drawing visitors from every corner of the country, from all corners of the world! From the daily thousands of visitors, G-E registers the names and addresses of all interested prospects. There has been one prospect registered every eight minutes. Their home addresses are proof, not only of the nation-wide, but the world-wide preference for General Electric products. A barrister's wife from London, a planter from the Argentine, a city official from far-off Calcutta are among those who have registered from foreign countries and who have ordered General Electric Kitchen appliances at the Fair.

Prospects' names from Portland to Portland, and from Canada to the Gulf, are gathered, sorted, and immediately passed on to G-E dealers "back home." Many of these prospects will be eventual owners of G-E Refrigerators, G-E Ranges, G-E Dishwashers and complete General Electric Kitchens. It is this interest in General Electric products that makes business good for G-E dealers. For not only at the World's Fair, but wherever General Electric kitchen appliances are displayed, public preference for G-E means more prospects and greater profits. General Electric Co., Specialty Appliance Sales Dept., Section DF73, Nela Park, Cleveland, Ohio.

A PROSPECT EVERY 8 MINUTES  
FOR A GENERAL ELECTRIC PRODUCT



## G-E DISTRIBUTORS TO CONVENE AUGUST 7

BRIDGEPORT, Conn.—To formulate plans for tying in immediately with the National Industrial Recovery Act, General Electric Co. will call together more than 300 officials of G-E distributorships to attend a three-day conference opening Aug. 7 at the company's Bridgeport works.

Gerard Swope, president of General Electric Co. and chairman of the newly organized Industrial Advisory Committee, is expected to be the principal speaker.

Others tentatively scheduled to speak include C. E. Wilson, G-E vice president and head of the Bridgeport plant; Dr. Charles Eaton, Congressional Representative from New Jersey; Bruce Barton, author and advertising man; and Charles Francis Coe, short story writer, announcer, and boxer.

## NEW QUARTERS OPENED BY SYRACUSE DISTRIBUTOR

SYRACUSE, N. Y.—Warner Distributing Corp., Leonard electric refrigerator distributor in this section, celebrated its fourteenth anniversary recently by opening new quarters on one of the main streets of this city.

The organization now operates in a territory embracing 17 New York counties. Business in Leonard electric refrigerators, from Jan. 1 to June 1, 1933, showed an increase of 69 per cent over sales for that of the same period in 1932.

L. J. Warner is president of the organization; F. L. Warner, treasurer; E. J. Wakefield, office manager; J. W. Roberts, service manager; and F. T. Brown, store manager.

## No Summer Slump Here



Employees work busily along the radio chassis assembly line in the Grigsby-Grunow factory at Chicago, as mid-summer production schedules and employment there are boosted to new all-time highs.

### GAIN WILL REPRESENT AIR FILTER FIRM

WORCESTER, Mass.—Coppus Engineering Corp., manufacturer of air filters here, has appointed W. S. Gain as sales representative in the northwestern part of New York state, and in two counties in Pennsylvania.

### Material Service Corp. To Sell Beer Coolers

MINNEAPOLIS—Material Service Corp., 2438 South Michigan Ave., Chicago, has been appointed Illinois distributor for Schaefer beer-cooling equipment and beer pumps, according to Harold L. Schaefer, president.

### REX COLE SALESMEN IN OLYMPIC TRYOUTS

NEW YORK CITY—Every salesman in the organization of Rex Cole, Inc., New York General Electric distributor, is now competing in a summer sales contest which terminates Aug. 15 with the 200 highest-ranking contestants eligible to participate in the 1933 Rex Cole Olympic Games to be held Aug. 30 on Travers Island.

Every man has been assigned a quota, and eligibility for the athletic matches will be decided on the basis of quota realization. To the department manager whose Olympic team aggregates the greatest number of points in the track and field events will be awarded a trophy for the departmental championship.

A divisional championship trophy will be awarded to the sales director, branch manager, or dealer whose track team aggregates the greatest number of points. Another trophy will go to the individual who scores the greatest number of points in the matches.

Morning of the athletic contests will be devoted to a 50-yd. dash, 12-lb. shot put, shoe race, potato race, standing broad jump, baseball throw, three-legged race, running broad jump, and 300-yd. inter-departmental championship relay. In the afternoon, the baseball championship will be decided in a series of inter-departmental games.

### World's Fair Featured In Servel Magazine

EVANSVILLE, Ind.—Servel Sales, Inc., has published a special issue of its dealer sales magazine, Simplified Refrigeration, illustrating and describing all installations of Servel and Electrolux refrigeration at A Century of Progress in Chicago.

In addition to the company's official exhibit in the Home Planning Hall, there are 70 places at the Fair where Servel or Electrolux equipment is on display or in actual use. These include 46 concession stands operated by Century Griddles and 10 owned by the Doughnut Machine Corp.

### Holcomb & Hoke Has New Branch Office

INDIANAPOLIS—Holcomb & Hoke Mfg. Co. has just opened a branch office at Washington and Bleeker Sts., Newark, according to E. R. Wurgler, sales manager of the organization. W. J. Morrissey, formerly district manager of the company, will be in charge of the new branch office.

A complete exhibit of the company's display cases, coolers, and grocery boxes will be maintained at the branch offices, says Mr. Wurgler.

### HOOSIER ELECTRIC CORP. SETS RECORD IN JUNE

INDIANAPOLIS—Hoosier Electric Refrigerator Corp., General Electric distributor here, made a larger volume of sales in June than in any other month in the company's history, according to A. F. Head, manager of the organization.

### BOSTON EDISON SELLS 225 UNITS IN MAY

BOSTON—During the month of May, the Boston Edison Co. sold and delivered 225 Kelvinator household models, according to officials of the utility.

## G-E WINDOW CONTEST WINNERS ANNOUNCED

CLEVELAND—Winners in General Electric Co.'s recent contest among distributors, dealers, department stores, and public utility companies for best refrigeration window displays have just been announced, and a \$25 cash prize has been awarded to the winner in each of these classifications.

Storz Electric Refrigeration Co. of Omaha was the winning distributor, while the Electrical Equipment Co. of Morgantown, W. Va., took the prize for the best dealer display. In the department store group, Stix, Baer & Fuller Co. of St. Louis was winner. Pacific Power & Light Co., Dayton, Wash., took the public utility prize.

The Storz display emphasized the necessity for plenty of ice cubes and storage space in refrigerators bought by persons who do considerable entertaining, and gave the exhibit an "up-to-the-minute" touch by placing the picture of Omaha's Johnny Goodman—who had just won the U. S. open golf championship—in the foreground. Figures of two tired golfers stood by the G-E in the window.

Appeal of the Electrical Equipment Co. display was user satisfaction. Names of all G-E users in the dealer's territory were printed on cards, and the cards were hung in a semi-circle around a General Electric refrigerator.

The department store display featured the name and reputation of General Electric Co., while the winning public utility played up the "10-Star" features of the deluxe G-E refrigerator line.

## N. Y. FRIGIDAIRE SALESMEN SET INDIVIDUAL RECORDS

NEW YORK CITY—Several retail staff members of the Aeolian Co., Frigidaire dealer here, definitely earned the right to be called "star salesman" by the work they did in June.

One salesman made eight sales in one day at the rate of one every 45 minutes, while another turned in one sale a day for eight consecutive days. Neither man had a lead from the salesroom floor or closed a deal on the floor, the management reports.

David Mercer, going out at 9 o'clock in the morning, returned at 4:30 p. m. with eight orders, totaling \$1,312 in value. H. L. Bender, another Frigidaire salesman, sold a total dollar volume of \$2,140 in eight days.

## Frigidaire Branch Is Headed by Kimball

BOSTON—L. S. Kimball, for the past four years manager of the public utilities division of Frigidaire Sales Corp. of New England, has been made general sales manager of that organization, according to John S. Pfeil, general manager. Mr. Kimball is succeeded by H. W. Fenner, who has been a member of the ice cream cabinet sales division.

Mr. Kimball started with Frigidaire in 1926 as a salesman. He became supervisor, and in 1929 was named utilities division head.

## Electrolux Sales Hit New High in Omaha

OMAHA—Sales of Electrolux refrigerators in this city during the first half of 1933 broke all previous records of the Metropolitan Utilities District of Omaha, Electrolux distributor here for four years.

Officials of the District state that up to the middle of May of this year, as many gas refrigerators were sold in Omaha as during the entire year of 1932, and that by the end of June the 1932 total had been doubled.

Number of Omaha Electrolux dealers this year is already double that of 1932, the District reports.

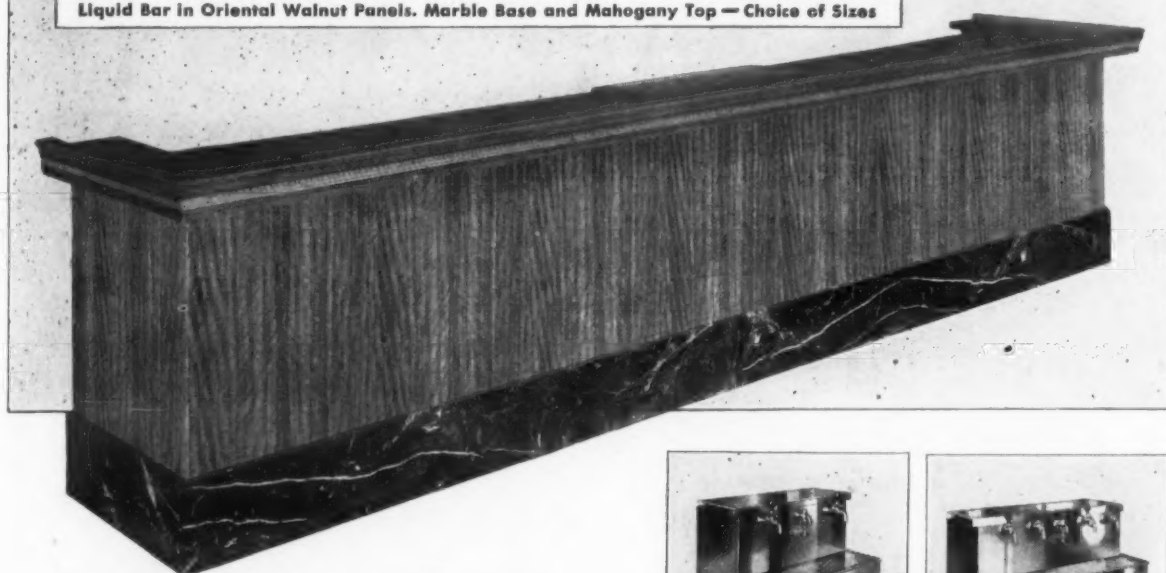
## SAN DIEGO BUREAU OPENS ADVERTISING CAMPAIGN

SAN DIEGO, Calif.—The local electric refrigeration bureau is sponsoring a series of newspaper advertisements and spot radio broadcasts to promote sales and assist dealers and distributors of this county in their midsummer sales campaigns, according to J. Clark Chamberlain, bureau secretary.

## CAPEHART VISITS MOHAWK DEALERS IN EAST

NORTH TONAWANDA, N. Y.—Homer E. Capehart, general sales manager of the Rudolph Wurlitzer Mfg. Co., maker of Mohawk electric refrigerators, is making a tour through the eastern part of the United States, contacting distributors and dealers of Wurlitzer products. He returned recently from a two-weeks trip through the midwestern section of the country.

Liquid Bar in Oriental Walnut Panels. Marble Base and Mahogany Top—Choice of Sizes



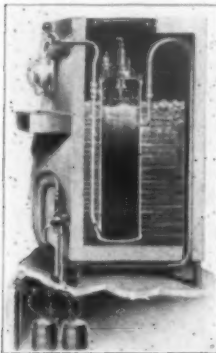
## A Quality Line for the Active Beer Market

The current beer situation leaves no doubt about the great popular demand. It will be a big task to equip new retail outlets for months to come.

In addition, many who set up hastily selected dispensing equipment in the beginning, now know its limitations. They know, from experience with makeshifts, just what they want. To these the Liquid Line will make a great appeal.

Here is an opportunity for those distributors to tie in with a complete line—probably the most widely and favorably known in the country. There is a dispensing unit, mechanically refrigerated or direct-iced, for installations of any size. From long, close contact with every dispensing need a full assortment of accessories has been built up.

In the "Liquid" Line you will find all you need to extend your business into this remarkably active field for new profit.

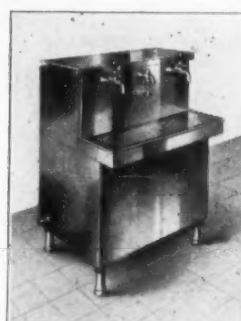


LIQUID-ZAHM Controlled Pressure Beer Drawing System

WRITE FOR 64 PAGE CATALOG ON

### The Complete Line of "LIQUID" BEER DRAWING EQUIPMENT

The LIQUID-ZAHM Controlled Pressure BEER DRAWING SYSTEM  
Dispensing Units in Wood or Stainless Steel  
Beer Coolers Electric Refrigeration Equipment  
Pressure Regulators Pumps Air Fittings  
Tees Couplings Beer Faucets Tapping Bungs  
Block Tin Pipe Beer Switches  
RED DIAMOND CARBONIC GAS  
COMPLETE MODERN BARS



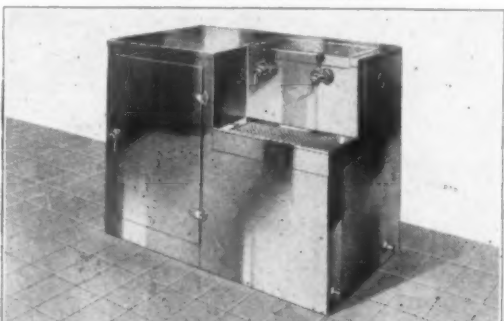
Red Diamond Beer Cooler for Two or Three Coils



Red Diamond Beer Cooler and Dispenser for Four Coils



Red Diamond Beer Service Bar for Two Half-Barrels. Wood as shown or Stainless Steel



Red Diamond Beer Service Bar for One Half-Barrel

## THE LIQUID CARBONIC CORPORATION

3100 SOUTH KEDZIE AVENUE, CHICAGO, ILLINOIS

CHICAGO SALES ROOM: 619-621 SOUTH WABASH AVENUE

Boston New York Philadelphia Atlanta Jacksonville Pittsburgh New Orleans Detroit Buffalo Cleveland Cincinnati Nashville Memphis  
St. Louis Minneapolis Kansas City Dallas Denver Salt Lake City Seattle San Francisco Los Angeles





WHAT IS THIS NEW TYPE FINISH THAT HELPS YOU SELL MORE REFRIGERATORS?

*It's* **DULUX**—THE MOST RECENT DEVELOPMENT OF DU PONT CHEMISTS. ITS EXCEPTIONAL DURABILITY AND LUSTROUS WHITE BEAUTY GIVE YOU SALES ADVANTAGES YOU HAVE NEVER HAD BEFORE

**H**ERE is a finish with the toughness of ivory. A finish so flexible that even hammer blows do not harm it. Dents in the surface, yes. But the DULUX finish does not crack or chip or flake off.

What a selling feature for the dealer who sells it! What a boon to the housewife who buys it!

But in addition to durability, DULUX brings to women the white beauty they want. This finish is a pure, glowing white, full of life, a white that resists yellowing and stays white. No wonder the women exclaim over it.

For years du Pont chemists tried to find such a finish for refrigerators. They wanted all the good qualities of fine porcelain. They wanted the added advantage of resistance to surface contraction and expansion, and sharp blows.

They succeeded with DULUX. They tested it in the laboratory . . . exposed it to the weather . . . tried it in

actual service. DULUX came through with flying colors! It proved its right to be called the outstanding development of all time in organic refrigerator finishes.

Let's just summarize what DULUX gives refrigerators:

1. A *hard, but flexible and tenacious finish*, that does not chip or crack under hard blows and surface tension. It's the result of a new, elastic vehicle, a du Pont development entirely different from the brittle materials used up to now.
2. A *durable finish* that resists moisture and protects against corrosion.
3. A *durable finish* with exceptional resistance to household oils, greases, acids and abrasives.
4. A *beautiful, white finish*, with a texture, depth and gloss unknown in other finishes.

5. A finish whose almost perfect whiteness remains under long outdoor or indoor exposure.

Leading manufacturers of electric refrigerators are specifying du Pont DULUX for their latest models. They like the speed and economy of its application, which make possible its use even on their more popularly priced units. They see in this new du Pont development an added advantage that husbands and wives will appreciate and want.

#### SEND FOR THIS BOOKLET

Is DULUX on the refrigerators you sell? Then use it to help you sell more of them. Learn more about this new finish. We will gladly send our new booklet on DULUX for refrigerators, which tells a more complete story of its selling advantages. Just address E. I. du Pont de Nemours & Co., Inc., Finishes Division, Wilmington, Delaware.

#### MORE PROOF

After being stored for two years, these tin strips covered with DULUX were crumpled as shown. There were no cracks in the finish. Even after straightening there was no sign of cracking or flaking.



**DULUX** *for refrigerators*  
REG. U.S. PAT. OFF.



## INSTITUTE TO OPEN LIGHTING PROGRAM

NEW YORK CITY—Edison Electric Institute, in cooperation with various branches of the electrical industry, will sponsor a national program during October and November of this year to increase the use of lighting throughout the country.

Actually, officials of the institute explain, the program will not be a "campaign," but will take the form of an effort to develop local lighting drives backed by national cooperation. It will be the first activity of the institute's special sales committee.

Chairman George W. Whitwell of the sales committee has appointed a special group consisting of M. E. Skinner, chairman; H. F. Barnes, General Electric Co.; J. F. O'Brien, Westinghouse Lamp Co.; and C. E. Greenwood of the institute's commercial department, to lay plans for the fall program.

With a series of circulars, letters, and other direct mail methods of stimulation, the utility companies, with lamp and lighting equipment organizations, will be mobilized for local activity. Trade organizations interested in the sale of lamps and lighting equipment will also take part in the drive.

National and local advertising campaigns during the two months of the lighting program will be built around the slogan, "More Light—Better Sight."

Members of the Edison Electric Institute's sales committee which authorized the fall lighting drive are as follows:

G. E. Whitwell, vice president, Philadelphia Electric Co.; P. S. Arkwright, president, Georgia Power Co.; J. F. Becker, vice president, United Electric Light & Power Co.; A. A. Brown, sales manager, Oklahoma Gas & Electric Co.; J. W. Busch, assistant vice

president, North American Light & Power Co.; R. D. Cutler, vice president, Hartford Electric Light Co.; J. E. Davidson, president, Nebraska Power Co.; D. M. DeBard, Stone & Webster Service Corp.

L. L. Edgar, vice president, Pacific Gas & Elec. Co.; W. L. Frost, vice president, Southern California Edison Co.; B. H. Gardner, director of sales, Columbia Engineering Corp.; W. H. Hodge, vice president, Byllesby Engineering & Management Corp.; E. W. Lloyd, vice president, Commonwealth Edison Co.; P. E. McChesney, vice president, Gulf States Utilities Co.; C. E. Michel, sales manager, Union Electric Light & Power Co.; G. E. Miller, sales manager, Cleveland Electric Illuminating Co.; J. D. Noyes, Detroit Edison Co.

P. H. Powers, vice president, West Penn Power Co.; F. J. Rutledge, vice president, United Gas Improvement Co.; W. H. Sammis, assistant vice president, Commonwealth & Southern Corp.; H. M. Sawyer, vice president, American Gas & Electric Co.; M. E. Skinner, assistant vice president, Niagara Hudson Power Corp.; H. P. J. Steinmetz, general sales manager, Public Service Elec. & Gas Co.; R. H. Tillman, manager, new business department, Consolidated Gas, Electric Light & Power Co.; H. E. Young, vice president, Northern States Power Co.; H. F. Smiddy, Electric Bond & Share Co.; and W. C. Bell, vice president, New England Power Association.

### Gibson Distributor Has Exhibit at Show

NEW YORK CITY—Bruno-New York, Inc., Gibson distributor here, had a household refrigeration exhibit at the second annual exposition of merchandise for building modernization, maintenance, and operation held June 14 to 17 here. The exposition was sponsored by the *Real Estate Magazine*.

## 8 CONTEST WINNERS NAMED BY COSGROVE

MANSFIELD, Ohio—Eight winning distributors in the Westinghouse "Turn Your Own Corner" sales contest which closed recently have been announced by R. C. Cosgrove, manager of Westinghouse Electric & Mfg. Co.'s refrigeration division. The winners are as follows:

Times Appliance Co., Inc., Albany, N. Y.; Penn Electric Engineering Co., Scranton, Pa.; Monroe Hardware Co., Monroe, La.; Wisconsin Sales & Service, Milwaukee; Westinghouse Electric Supply Co., Omaha; Mook Electric Supply Co., Canton, Ohio; Intermountain Appliance Co., Denver; and Westinghouse Electric Supply Co., Los Angeles.

### DALLAS DEPARTMENT STORE OPENS G-E KITCHEN

DALLAS, Tex.—A General Electric household appliance department was opened July 1 in the A. Harris & Co. department store here, featuring a G-E all-electric kitchen, according to S. C. Griswold, president of Electric Household Appliances, Inc., the General Electric distributorship with which arrangements for the department were made. This is the first time the department store has ever handled household appliances of any kind, says Mr. Griswold.

### G-E AIR-CONDITIONING OFFICE MOVED TO NEW BUILDING

NEW YORK CITY—Offices of the air-conditioning department of the General Electric Co. here have been moved from 120 Broadway to the new General Electric building at 570 Lexington Ave.

## Westinghouse Stages Dealer Meetings; Michigan Dealers Hear Sales Plans

MANSFIELD, Ohio—Representatives of Westinghouse Electric & Mfg. Co.'s refrigeration division are this week concluding a series of distributor and dealer meetings which have been held over a period of two weeks to introduce the company's new "Master Series" line of electric refrigerators and the "Master Builders" mid-summer sales campaign.

Sixty dealers were present at a meeting held July 10 by the Tafel Refrigerator Co., Inc., Westinghouse distributor in Cincinnati. In charge of the meeting were J. W. Johnston, central district refrigeration supervisor of Westinghouse; J. E. Hugo, district sales promotion manager; Frank Kohnstamm, Frank Colville, Cincinnati manager; J. S. Kelly, Jr., vice president of the Tafel company; and Douglas Via, its wholesale manager.

On the following day, a meeting was held at the Kentucky hotel in Louisville, Ky., sponsored by the Tafel organization, which is the Westinghouse distributor in that territory, also. Thirty dealers were present to see the new line and hear sales plan presentations by Messrs. Hugo, Johnston, and Kelly, and Paul Tafel, president of the distributorship; and Tom Mason, the distributor's dealer manager.

#### Coney Island Meeting

Johnson Electric Supply Co., distributor in the Coney Island section of Cincinnati, was host to 50 Westinghouse dealers who met on July 12 to see the new line. Besides Mr. Hugo and Mr. Johnston, the following took part in the program: Claude Johnson, president; Willard George, refrigeration manager; and Max Ewing, dealer representative of the distributorship.

In Columbus on July 13, 125 dealers met at the Columbus country club for a session sponsored by the American Sales Co., Westinghouse distributor. In charge were Messrs. Hugo, Johnston, and Danley of the factory organization, and A. G. Goldenberg, president of the distributorship.

Dealers—85 of them—from the Youngstown section of the Mook Electric Supply Co., Westinghouse distributor, were present at a meeting held July 14 in the Ohio hotel, Youngstown. Distributor officials taking part on the program were H. M. Mook, president; W. L. Fritz, manager of the Youngstown division; and G. M. Nutter, refrigeration manager of the company's three branches.

#### Two Michigan Sessions

On July 18, 19, and 20, meetings were held in Flint, Mich., Grand Rapids, Mich., and Toledo, respectively. July 24, a meeting was held at the Danforth distributorship in Pittsburgh, and yesterday—July 25—another was staged in Canton.

S. M. Davison and Clyde Moran of the Westinghouse factory, and A. E. Peabody, southwestern district refrigeration supervisor, and A. B. Murphy, sales promotion manager for that area, have been conducting dealer meetings in the following cities: Little Rock, St. Louis, Houston, San Antonio, Dallas, Oklahoma City, Wichita, Denver, and Kansas City.

Roger Bolin led meetings at the Times Appliance Co., New York City Westinghouse distributor; the Elin Co., distributor in Newark; and the Times Appliance Co. branch in Albany.

J. J. Moffatt, sales promotion manager of the northwestern district, and H. M. Butzlaff, refrigeration supervisor for that section, have had charge of meetings in Indianapolis, South Bend, Chicago, Waterloo, Des Moines, Sioux City, Omaha, St. Paul, Milwaukee, and Peoria, Ill.

### Hills, Lohmann Win in Cole Sales Contest

NEW YORK CITY—L. R. Hills of the sales promotion department and L. Lohmann of the product department, both of Rex Cole, Inc., G. E. distributor here, are winners of cash prizes as a result of non-selling employees' activity.

Mr. Lohmann is a winner of the first prize in the product department, and Mr. Hills is winner of the prize for all other non-selling departments. Each received \$25 in cash.

Other prize winners were: Edward Hauser, W. C. Jaeger, A. B. Bowers, William Shea, Miss Etta Marie Brandt, A. Krug, and A. B. Hall.

### NEW HOUSEHOLD USES FOR DOMESTIC REFRIGERATORS

Did you know that gum may be removed from clothing by holding an ice cube against it? The gum will harden, crumble, and may then be brushed off.

Also, that in an emergency, if clothes dampened for ironing cannot be given prompt attention, they may be wrapped tightly in waxed paper and placed in an electric refrigerator. They can be left there for some time without mildewing. In such an emergency, the hydrator may be used for the same purpose.—*The Liquid Line*.

DETROIT—The Westinghouse mid-summer sales campaign on electric refrigerators was launched in this district last Tuesday and Wednesday with the Westinghouse Electric Supply Co. of Detroit holding meetings for dealers at its branches in Flint and Grand Rapids.

Twenty-eight dealers and their salesmen attended the Flint meeting, while 48 were on hand to see and hear about the new line and the "Master Builder" sales campaign and contest at Grand Rapids.

Showing of three films featured the meeting. One film was devoted to features of the new line, a second to competition, and another to the accomplishments of Westinghouse in the electrical field.

Dealers were also introduced to the new plan whereby Westinghouse will furnish accessories for the refrigerator (vegetable pans, water-cooling jugs, etc.) to the dealer direct from the manufacturer at wholesale prices.

The "Master Selling 5-Step" sales plan, the "Padlock and Key" plan to bring prospects into the showroom, and details of the Master Builders sales contests were presented by factory representatives.

C. L. Canfield of Commercial Investment Trust discussed financing problems for the dealers.

The meeting was planned and conducted by J. H. Campbell, district manager, and William Howlett, sales promotion manager of Westinghouse Electric Supply Co. of Detroit. Fred Wyatt and Walter Tschache, district wholesale salesmen, made the presentation of the new line.

Factory representatives who had a part in the program included J. W. Johnston, district refrigeration supervisor; J. E. Hugo, district sales promotion manager; and Charles R. Perry, merchandise supervisor of Westinghouse Electric & Mfg. Co.

## LOTS OF AIR CONDITIONING INSTALLED IN WASHINGTON

WASHINGTON, D. C.—This city, with its sultry climate and intense governmental activity throughout the summer months, has proved to be a fertile field for the science of air conditioning. Practically all new government buildings being erected in the capital are being air conditioned, and in addition air-conditioning equipment has been, or is being, installed in buildings already constructed.

At present the York Ice Machinery Corp. of York, Pa., has under construction or under contract, air-conditioning systems for six government buildings in Washington, which in their aggregate will have refrigeration capacity equal to the melting of practically 5,000 tons of ice every 24 hours. These installations are the new Archives building, new wing of the Senate Office building, Department of Justice building, Post Office building, and Library of Congress. In addition the York company has supplied the refrigeration machinery for the installation in the Federal Warehouse building.

The installation in the Archives building is for the combined purpose of furnishing comfortable temperatures and providing proper atmospheric conditions for the preservation of government documents to be stored there, for scientific tests have shown that deterioration of documents is caused almost entirely by changing atmospheres, from the dry artificial heat of winter to the humid heat of summer.

### Bookkeeper Spies Roll, Sells Westinghouse

RIVERSIDE, Calif.—When a customer paying a small account of \$2.05 at the Riverside Hardware Co., local Westinghouse dealer, displayed a large roll of bills, Fannie G. Elkin, bookkeeper, decided some more of the money might be lured into the company's till.

She invited the customer to see a Westinghouse refrigerator, gave him a full demonstration, and asked him to bring his wife in the following day. After the same demonstration had been given the wife, an evening interview closed the deal.

Within six days, the Westinghouse was installed, and the money was in the Riverside Hardware Co. cash register.

### Salesman Sells 348% Of Contest Quota

STATESBORO, Ga.—During the two-months sales campaign sponsored by the Georgia Power Co. between May 4 and July 1, Dan Blitch, salesman for the utility's branch here, sold 49 units for a total of \$7,780—348 per cent of his quota in this town of 4,000 people.

## Hussmann-Ligonier Policy Regarding Mechanical Refrigeration

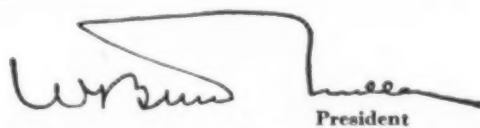
We believe it to be to the best interest of our Company as manufacturers of refrigerators to confine our business solely to the manufacture and sale of refrigerators; and that it is to the best interest of manufacturers of mechanical refrigeration to confine their business to the manufacture and sale of mechanical refrigeration.

No mechanical refrigeration concern owns any interest in our business, nor do we own an interest in any mechanical refrigeration concern. We have no contracts or agreements under which we are obligated to recommend any make or makes of mechanical refrigeration, nor do we contemplate entering into any such contracts.

Our Company does not sell compressors, expansion valves, or other items relative to the purchase, installation or servicing of mechanical refrigeration in connection with Hussmann-Ligonier equipment, with the exception of Coils.

The Hussmann-Ligonier Company equips at the Factory a large percentage of its Display Cases with Coils. These coils are designed specifically for our equipment, are purchased in open competition from coil manufacturers on a basis of definite specifications. Hussmann-Ligonier equipment built with such Coils is sold under the name of Hussmann-Ligonier "Humid-I-Coiled" equipment.

We would like to set forth clearly our reason for installing Coils in Display Cases at our Factory. We believe we are able to insure to our customers a performance of the equipment, when properly connected to any standard compressor of the correct size, which he could not obtain with the old-fashioned Case and a ready-made coil not specifically designed for that particular refrigerator. Further, we believe we are able to give to our customer a more attractive, more perfect, and more economical installation of the coils when made at the Factory as compared to the installation of coils in the customer's store as has been the practice in the past.

  
President

**Hussmann-Ligonier Company**  
and  
**Allied Store Utilities Company**

WHOLLY OWNED SALES SUBSIDIARY OF HUSSMAN-LIGONIER COMPANY



## HOME SERVICE

### G-E'S EDWINA NOLAN ISSUES 3 BULLETINS

CLEVELAND—Three home service bulletins from the pen of Edwinna Nolan, General Electric home economist in the specialty appliance division, have made their appearance to push sales of all-electric kitchens and the Hotpoint range.

First of these is calculated to overcome any feeling of stagefright on the part of the home service demonstrator who is faced with an audience of women waiting to be convinced as to the merits of electrical appliances, being a carefully worked out plan that includes directions for cooking, as well as the exact wording to be used in the lecture.

"We are conducting this meeting today to introduce a new service to the women of (name of your city)," says the home economist, looking cool in her starched apron up in front of an array of kitchen equipment. "We are here to present 'The General Electric Health Kitchen.'"

#### Kitchen Functions

With this as an introduction, the demonstrator divides the routine of kitchen work into three major functions—preservation, preparation, and sanitation, linking the functions to the refrigerator, range, and dishwasher, respectively.

Her next method of attack involves the amount of time spent in the average kitchen, which she shows by a chart is about 7½ hours per day.

"Seven-and-a-third hours a day spent in the kitchen is the equivalent of an 8-hour working day. Two thousand six hundred and sixty-five hours a year is approximately one third of a woman's life hours a year spent in the work shop of her home, the kitchen, if we compare the time a woman spends in her kitchen to that of the time a man spends in his office.

"Also, she spends 40 per cent of the income of the family doing her job. Today, every well-run office is equipped to do the best job possible with every modern piece of office equipment. The average kitchen today is not given the thought in planning that it rightfully should have."

That the General Electric Co. does not hope to sell its complete kitchen to housewives, but simply wishes to suggest that an old-fashioned kitchen can be replaced step-by-step by purchase of the refrigerator, range, and dishwasher separately is emphasized.

How the refrigerator can be made to work for the housewife is first explained, together with storage features of the different sections.

The demonstrator points out the compartments in one of the refrigerators nearby as she explains the features.

#### Uses of Refrigerator

She next turns her attention to use of the refrigerator.

"I would like to see the hands of the women present that own an electric refrigerator," she requests. "How many that use an electric refrigerator to the utmost advantage? If your husband gave you a lovely new outfit and you wore everything but the hat, you would not feel as if you were getting the most from the investment, would you? Just think of the investment in an electric refrigerator—the most valuable piece of equipment in your home. Are you using it correctly?"

Chart No. 4 shows that the electric refrigerator is useful through protection of health and happiness, savings in time and labor in the kitchen, cutting household expenses, giving variety to planning and meal preparation, and adding to the luxury of entertaining.

Emphasizing that the cost of a refrigerator is after all the main point, the demonstrator warns against purchase of a cheap box, which will be low in price but high in cost.

The cooking part of the demonstration now begins. A complete oven dinner, consisting of 3 lbs. roast stuffed chicken, steamed sweet potatoes, carrots and peas, spiced cranberries, and peach brown Betty, is taken from the refrigerator, where it has been stored since the day before all ready to cook. The dinner is placed in the oven, which is regulated according to instructions in the bulletin, and is forgotten about until the end of the class.

Turning next to the range, the demonstrator outlines its advantages. For better explanation, she divides the range into the surface units (including Thrift Cooker) and the oven.

First cooking demonstration on the range is made in the Thrift Cooker, which is lifted out of position for demonstration to the audience. The demonstrator will show how this 5-qt. aluminum container, with perforated rack and insulated cover, is provided for long slow cookery opera-

tions, steaming and baking of vegetables, sterilizing, etc.

A complete meal for five persons, consisting of pork roast, sweet potatoes, onions, and cherry pudding is placed in the cooker, the perforated rack separating the vegetables and pudding.

Next taking up the surface units of the range, which correspond to the burners on a gas stove, the home economist discusses features of the heating factor, the G-E Calrod unit. To demonstrate these surface units, she boils two quantities of potatoes in a very little water, claiming that less water is needed for the purpose on an electric range than is required with a gas range.

"The controlled LOW heat of the electric unit," is her next point, "eliminates the use of the double boiler. The so-called 'double-boiler' cookery used on a flame type stove is done on the electric range in the ordinary sauce pan recommended for surface cookery."

Next operation is using the oven, features of which are discussed at some length.

The demonstrator then removes an already-mixed coffee cake from the refrigerator, where it has been kept in waxed paper. This, with broiled bacon, omelet, and coffee, she prepares on the range as a 15-minute breakfast.

To gain an idea of the accuracy of the bulletin's directions, notice the following quoted paragraph:

"When the two red hands of the oven have reached 400° we will start baking our coffee cake. (Arrange bacon on broiler pan, removing inside pan. Mix omelet. This should take about 10 to 12 minutes. Remove coffee cake. Place broiler pan under upper unit. Turn temperature regulator to 500° F., switch to broil. Bacon will take about 4 minutes. Remove grill from broiler. Pour omelet into broiler pan. Place in oven. Turn switch OFF. Close the door. Omelet will take 4 minutes. When finished cooking, arrange on platter with bacon strips and sprigs of parsley. While breakfast is cooking, give recipe for Miracle Cake.)"

At the end of the range demonstration, the potatoes and breakfast are displayed for comment.

Passing on to the electric dishwasher (while the oven dinners are still cooking), the demonstrator gives various advantages.

Capacity of the dishwasher is 80 pieces of china and glassware, as well as silver. The washing bowl, she explains, is made of acid resisting enamel, and is equipped with rubber coated trays for protection of the dishes.

The oven dinner and Thrift Cooker dinner are now ready for display.

The lecturer ties her lecture together by discussing briefly care of the equipment and by showing how all features of the kitchen are contributory to one another. Closing her remarks, she offers the service of the General Electric Kitchen Planning Institute to listeners, inviting them to send in floor plans of their kitchens for suggestions on remodeling.

The bulletin also contains recipes for the dishes prepared during the demonstration.

### KELVIN ECONOMISTS ARE ACTIVE IN ANNUAL DERBY

DETROIT—Kelvinator home economists throughout the country are participating for the first time in the annual Kelvinator Derby, opening July 24 and closing Sept. 16.

The Agua Caliente track has been set aside for activities of the home service departments. Although 76 distributorships and utilities have such departments, it is not expected that all will participate in the derby.

As with other races in the derby, tickets are being issued for furlong prizes to be awarded during the contest—and for derby prizes—to be awarded at the end of the race. Each cooking school held during this time will count for five tickets; each home-makers club, for four tickets; a 15-minute broadcast, four tickets; "open house," three tickets; home demonstration, three tickets; each time the model kitchen is used, two tickets; classroom or club lecture, two tickets; five inches of publicity, two tickets; home service call, one ticket; every two recipes used in Kelvinator Cookery, one ticket; and for special activities not listed, two tickets each.

Weekly reports will be made. Prizes for the first furlong, the Inaugural, will be given out three days after the furlong is finished, Aug. 5.

Entry blanks and promotional literature have been sent out inviting home economists to participate in the event, and follow-ups will be mailed out regularly during the contest.

## Cooking Up New Recipes



Edna Sparkman, Ruth McManus, and Elba Schmidt, Westinghouse home economists, beat an egg together.

### MISS FROST TO CONDUCT SCHOOLS IN CINCINNATI

GREENVILLE, Mich.—Leaving the Gibson Electric Refrigerator Corp. factory here July 24, where she has been preparing, testing, and editing a new 48-page recipe book soon to be issued to accompany sales of the 1933 L line, Jacqueline Frost, home economist, has gone to Cincinnati to conduct home service demonstrations in cooperation with Tri-State Distributing Corp. and Krauss Radio Stores,

Gibson distributor and dealer, respectively.

After a few weeks in Cincinnati, Miss Frost is expected to spend the remainder of the summer and early fall contacting selling organizations in Buffalo, Rochester, Providence, Boston, and other eastern cities.

Two cooking schools were held by Miss Frost during June in connection with the Bridgeport, Conn., distributor, D'Elia Electric Co. The first, at Gamble Desmond Department Store in New Haven, drew over 500 interested women. It was followed by a second school at Franklin Furniture Co., Bridgeport, Conn.

## FRIGIDAIRE ISSUES NEW RECIPE BOOK

DAYTON—How to operate and care for a new super-series Frigidaire as well as how to prepare interesting foods with it, is set forth in a recipe book just issued by Frigidaire Corp. home economics department, entitled "Your Frigidaire." One hundred thousand copies of the booklet have been prepared for distribution.

Just inside the attractive orchid-and-black modernistic cover (washable), is a picture of Miss Verna L. Miller, home economics director, and a short introduction to Frigidaire refrigeration.

Beginning with "A Voyage of Discovery," illustrations and text point out features of the refrigerator, such as the automatic tray release, glass defrosting tray, hydrator, etc. Next come suggestions on placement of foods in the refrigerator, complete with diagrams; care of the box and service hints conclude this section.

How foods may be prepared some time in advance of serving and stored in the Frigidaire is the next subject treated, under the heading "New Thrills in Cookery"; while "New Thrift in Marketing" points out that food money is saved through long-storage facilities, as the housewife is enabled to buy large quantities of food at once and can take advantage of bargain prices.

The recipe section has achieved novelty, few of the dishes being stereotyped. For example, two chapters not always in such books are "101 Suggestions for Left-Overs," and "Plain and Fancy Ice Cubes." Other particularly inviting chapters deal with appetizers, ice creams and mousses, entrees, sandwiches, marlows (marshmallow frozen desserts), and frozen salads.

# The SHELVA DOR

U. S. PATENT 1898022



An Electric Refrigerator with Shelves in the door for eggs, butter, bacon, and other small articles

**\$89<sup>50</sup>**

DELIVERED  
INSTALLED  
ONE YEAR  
FREE  
SERVICE

An exclusive patented feature found only in the New

**CROSLEY**  
Electric  
REFRIGERATOR

Just open the door . . . and THERE it is! Here in a nutshell you have the newest and most important improvement in refrigerator cabinet design since the invention of the ice box. Now . . . no more reaching . . . no more searching for the little things that, in ordinary refrigerators, are so hard to find! No more disarranging of everything . . . no more sleeves dragged through butter . . . no more foods leaking through the shelves. Think of the time saved . . . think of the increased "usable" capacity of the New Crosley Electric Refrigerators with Shelvador. Shelvador actually gives the Crosley Electric Refrigerators greater capacity than their ratings indicate by increasing their "usable" capacity. Try to put everything that goes into Shelvador on the shelves of an ordinary refrigerator, and you'll be amazed. An orange takes as much "shelf room" in the ordinary refrigerator as a bottle of milk. In the Shelvador it takes only the space of an orange.

Only Crosley Electric Refrigerators can use the Shelvador, for it is an exclusive patented Crosley feature. For anyone to buy a refrigerator without Shelvador is to deny himself a great convenience and time saver as well as to buy something already outdated. When people see it they quickly realize that they ought to replace their present refrigerator.

The added convenience of Shelvador costs nothing. Even if the New Crosley Electric Refrigerators did not have this feature, they would still be the world's outstanding refrigerator values at the new low prices. With Shelvador, Crosley Electric Refrigerators go so far beyond ordinary values that there is nothing with which to compare them. They are famous for trouble-free operation, quietness and convenience.

Three sizes to meet every home requirement . . . each size with more "usable" space because of Shelvador. And remember . . . insulation is not sacrificed in the Shelvador . . . the exterior of the door is extended to permit the use of a standard thickness of insulation.

See your Crosley distributor. Examine the Shelvador. Instantly you will see its advantages. Instantly you will realize why the New Crosley Electric Refrigerators are sweeping competition before them.

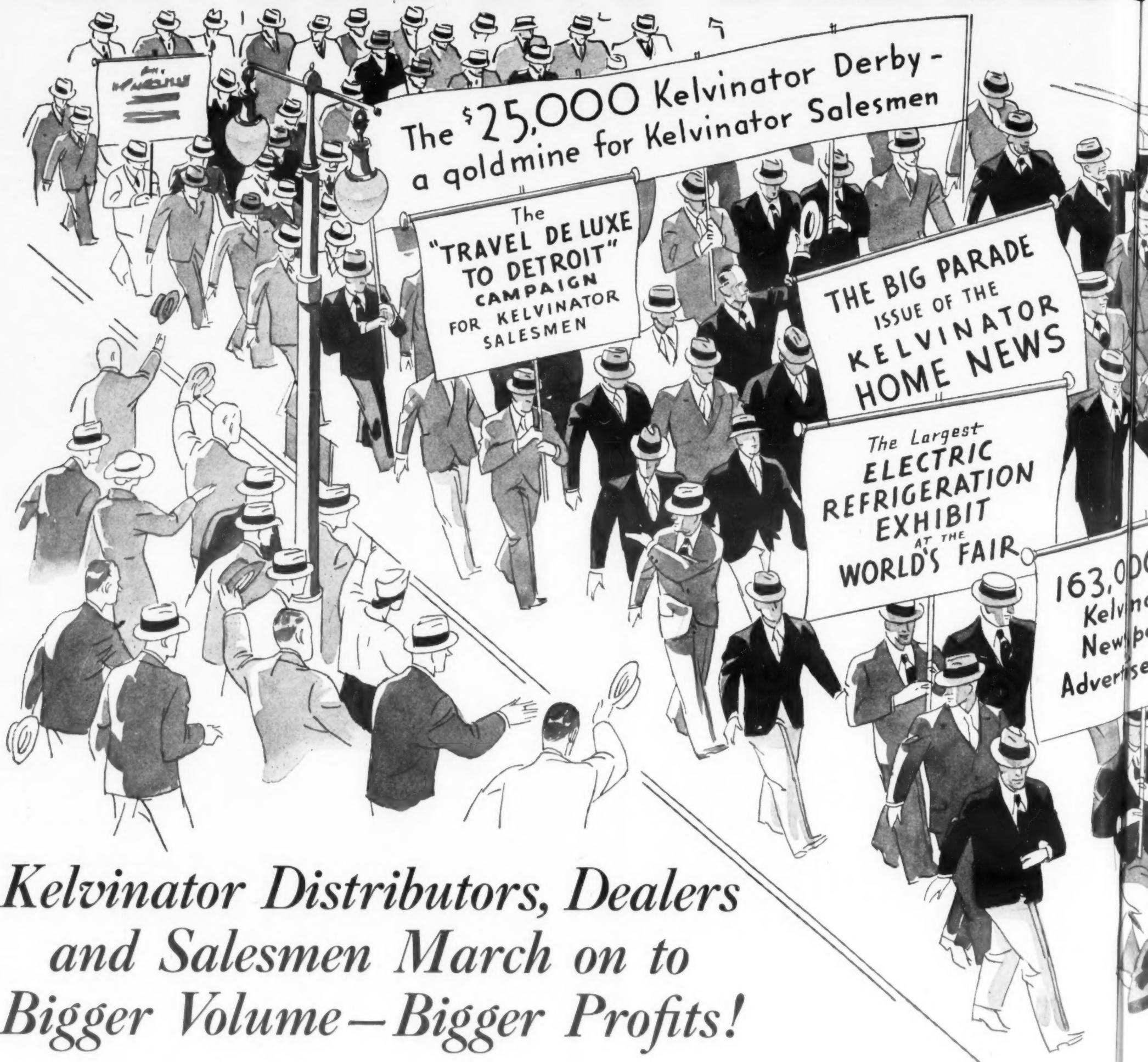
**ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE**

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher  
**The Crosley Radio Corporation - Cincinnati**  
POWEL CROSLEY, Jr., President. Home of "the Nation's Station"—WLW

**CROSLEY** **Electric** **REFRIGERATOR**  
WITH SHELVA DOR



# KELVINATOR'S GREATEST



## *Kelvinator Distributors, Dealers and Salesmen March on to Bigger Volume—Bigger Profits!*

**M**ORE than 30,000 Kelvinators shipped in April—a 19 year record. 43,357 in May—another record. 44,525 orders in June—the biggest June in Kelvinator history. Nearly one hundred and twenty thousand Kelvinators in three months!

The Big Parade to Kelvinator and by Kelvinator marches on with the greatest summer sales drive in Kelvinator history to new high records of volume and profit during August and September.

There will be no "let down" this summer with Kelvinator. The business is there and Kelvinator is GOING OUT

AFTER IT! National magazines—Saturday Evening Post, Collier's, Time, Literary Digest, and American Weekly—will carry the largest schedule Kelvinator has ever run during these months. Newspapers, from coast to coast, will run millions of Kelvinator advertisements every week. A dominant billboard campaign—the biggest electric refrigeration exhibit at the World's Fair—hundreds of thousands of copies of the Kelvinator Home News going into the homes of buyers—the Travel DeLuxe to Detroit and the \$25,000 Derby sales contests for Kelvinator salesmen are the tremendous activities Kelvinator is putting

behind its dealer organization to insure a continuation of the record-breaking business it has enjoyed this spring.

The Big Parade Marches On to the biggest summer volume in Kelvinator history. Why not march with it—volume and profit? Wire to-day for complete details. Your inquiry will be treated confidentially.

KELVINATOR CORPORATION, 14245 Plymouth Road, Detroit, Mich. Factories also in London, Ont., and London, England.

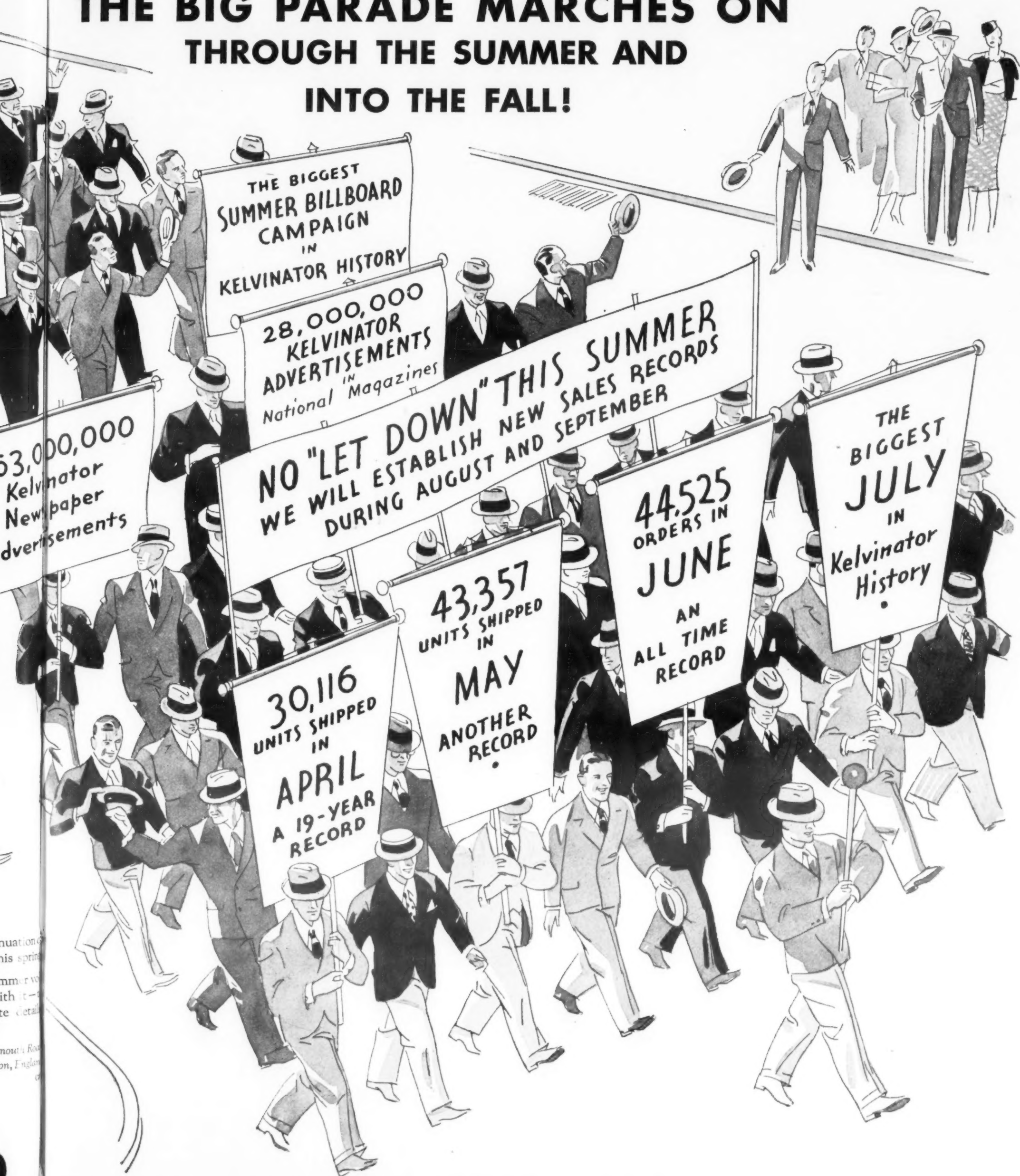
**NOW IS THE TIME TO COME WITH**

# KELVINATOR



# ST SUMMER SALES DRIVE!

THE BIG PARADE MARCHES ON  
THROUGH THE SUMMER AND  
INTO THE FALL!



PACEMAKER FOR THE INDUSTRY



## ELECTRIC REFRIGERATION NEWS

The Newspaper of the Industry  
Published Every Week by

BUSINESS NEWS PUBLISHING CO.

Also publishers of REFRIGERATED FOOD NEWS (monthly) and REFRIGERATION DIRECTORY and MARKET DATA BOOK (annual)  
550 Maccabees Building, Woodward Ave. and Putnam St.  
Detroit, Michigan. Telephones: Columbia 4242-4243-4244-4245

### Subscription Rates:

U. S. and Possessions and countries in Pan-American  
Postal Union: \$3.00 per year; 2 years for \$5.00  
Canada: \$6.00 per year (U. S. Money)  
All Other Countries: \$5.00 per year  
Advertising Rates on Request

F. M. COCKRELL, Publisher

GEORGE F. TAUBENECK, Editor  
JOHN T. SCHAEFER, Engineering Editor  
PHIL B. REDEKER, Assistant Editor  
ELSTON D. HERRON, Staff Writer

HOWARD W. MATHER, Advertising Manager  
GEORGE N. CONDON, Business Manager  
JOHN R. ADAMS, Production Manager

Member, Audit Bureau of Circulations  
Member, Associated Business Papers  
Copyright, 1933, by Business News Publishing Co.

VOL. 9, NO. 13, SERIAL NO. 227, JULY 26, 1933

## Are Readers Misled By Advertisements?

TO what extent should the publisher of a business paper exercise a censorship over the statements which appear in the paid-space advertisements of manufacturers?

Two letters published in this issue, one from a distributor and one from a manufacturing executive, express opinions which imply a considerable degree of responsibility on the part of a publisher for the statements of advertisers. These letters, and others received occasionally in the past, indicate that it may be worth while to discuss some of the problems involved in rendering a service of the kind suggested.

We have given the subject much thought over a period of several years and have arrived at some rather definite conclusions as far as our own publishing policy is concerned. Broadly speaking, we do not believe that it is either practical or desirable for the publisher of this particular kind of paper, serving this particular kind of industry, to attempt anything more than a minimum degree of censorship.

The basic theory of censorship, as we understand it, is that *weak, young, or innocent* minds should be protected from evil influences by strong, mature, and worldly-wise mentalities. The theory seems to be all right. The aim is laudable enough. In actual operation, the chief difficulty encountered is that of finding censors of sufficient *wisdom* to serve the purpose. Another is the resistance of the protectees against being protected by the protectors.

Our own experience is that the demand for greater censorial activity comes almost entirely from those who seek to protect *others*. Apparently no one is conscious of a need for protection to *himself*. We can recall only half a dozen instances in the history of this paper where a reader complained or inferred that *he* was misled by an advertisement. In most of these cases the obvious purpose was to enlist our help in putting pressure on the advertiser to settle some disputed claim for a refund.

Exceeding the number of complaints have been the cases in which we have refused advertising because of the possibility that an innocent buyer *might* be defrauded. We are particularly suspicious of unknown advertisers, without credit rating, who propose payment in advance for some new product or service which is inadequately described and specified.

Still more often we have refused advertisements, or required revision of copy, when there was a violation of postal regulations or well-established publishing rules (such as improper use of the name or trademark of a competitor).

We have also frequently advised advertisers against the use of certain types of copy which we believe to be ineffective and unprofitable to the advertiser. In fact, most of our worries with advertising copy arise from the advertiser's inexperience and his tendency to say things which will hurt himself and his cause.

Regarding *exaggeration*, which our Webster defines as "a going beyond the bounds of truth,

reason, or justice," we are inclined to be rather complacent. Not that we are unsympathetic with the ideal of "truth in advertising," but simply because we believe that exaggeration defeats itself. The test of advertising effectiveness is not determined by how many people *read* the message but by the number of potential buyers who *believe* what they read.

Experienced advertisers have learned that "truth in advertising" is not so much a matter of business *morality* as it is one of profitable use of the money expended. The *confidence* of the buyer is the objective and confidence is not acquired by the use of blatant superlatives.

The advertising pages of ELECTRIC REFRIGERATION NEWS represent a medium for *self-expression* by all those who have goods or services to sell to the industry. These pages provide sort of a stage on which each one may present his wares and tell his story. The "performance" is repeated weekly, with changes in the program, to an "audience" which is actively interested but highly critical. One large group consists of buyers of parts, materials and supplies—the engineers, production executives, and purchasing agents of manufacturing companies. Another group is made up of distributors—most of them independent business men of wide and varied experience. A third group includes dealers—local merchants who devote their entire time to the *buying and selling* of goods.

These three major groups of readers are anything but weak, young, or innocent. Any such a luckless neophyte who ventured into this highly-competitive, specialty-selling business would probably be chewed up before he had a chance to read his first sample copy of the NEWS.

We have tried to imagine ourselves as a benign censor watching over the advertising columns of the NEWS to make sure that the gullible (?) purchasing departments of Frigidaire, General Electric, Kelvinator, Westinghouse, etc., are not short-changed by any of our sharp advertisers. Our own experience in trying to sell these corporations an extra advertisement now and then is that they are plenty tough and entirely competent to look after themselves.

Also, after attending various meetings of distributors and observing them at work and at play (including such innocent games of chance as are occasionally indulged in by tired business men away from home and office), we have acquired a profound conviction that a distributor needs our protection about as much as Primo Carnera needs a bodyguard.

Now we come to the poor little dealer. We have heard a lot of wailing about the plight of the small-town merchant and we don't dispute the fact that he has his troubles, but we doubt whether the independent storekeeper is ever misled by the advertising in his *trade paper*. A dealer who is smart enough to read his trade paper soon gets on to all of the tricks. Save your tears for the boob who buys a new line from a stranger without checking up on the manufacturer's standing in the industry as revealed by his trade-paper advertising.

In our office we have much documentary evidence of a very peculiar attitude of dealers toward advertising in ELECTRIC REFRIGERATION NEWS. Having taken on the line of a given make of refrigerator, he wants to see that make advertised and he wants to read news about that make. He glories in the success of the company from which he buys. If he is the kind of dealer who is keen to beat his competitors, he cheers whenever "his company" puts a fast one over on the field. Far from being misled, he becomes a partner in the crime.

If the advertising fades and the news dies down, the dealer becomes restless and worried. He quickly senses that all is not well at headquarters. Or, if his faith in the product and maker remain unshaken, he figures the editor has been bribed and that "his company" is getting a raw deal.

The real secret, we believe, is that the dealer reads the advertising to confirm his own judgment as a *buyer* and to get ammunition to use as a *salesman*. If he believes the advertising and can use it, it is doing its job. If the advertising does not ring true, the dealer loses confidence, but he is *not* misled. It is the advertiser who pays the penalty for his own delusions.

## LETTERS

### Customers Overlooked

Sam S. Glauber, Inc.  
Mayflower Electric Refrigeration  
East 79th St., New York City  
July 19, 1933.

It sure was a pleasure to read the minutes of the meeting the manufacturers held recently in Detroit. A reader couldn't help feeling his presence in the gallery of the assembly room.

Mr. Evans impressed the gathering that he was concerned with two things:

- 1—Protection of the small manufacturer.
- 2—A method of control of production.

A few remarks were made about Nema.

My opinion is that *all* manufacturers were too selfish at that meeting. They were scared about the big ten's powers. They realize that the leaders in the industry employ the best legal talent, besides mechanical and sales personnel.

But, the so called small manufacturer overlooked a very vital part of his organization—his customers. The big manufacturer doesn't have to provide legislation to destroy the small one. It has other methods, i.e.:

1. It sells through its own outlets direct to the consumer.
2. It finances its own paper.
3. It offers free trial periods.
4. It sells the department stores.
5. It dumps its surpluses through their own outlets and department stores.
6. It offers rebates in the form of:  
A. Prices and terms.  
B. Service.  
C. Advertising.

Now Mr. Evans, and your good friends what did you say about protecting the people who keep you in business? Not a single one of you said anything about protecting your outlet.

The small manufacturer knows very well what it means to secure good outlets, and then try and keep them.

In forming the code for the refrigeration division, I warn you who are not in the Big Ten to make proper provision to protect your outlets to be able to sell your quota.

May I suggest that each manufacturer selling through distributors only have one or two of his leading accounts meet to help in the formation of the code. We distributors know our good and bad points just as you know yours. We both must work together, so let's talk it over. Let's be quick about it too!

A. S. PENT.

### Better Understanding

Riley Engineering Corp.  
Detroit

July 22, 1933.

Editor:

The Nema meeting was handled in a way to deserve a lot of praise to those who had the details of the whole meeting and entertainment in hand. I am sure that everyone who attended appreciated the courtesies extended by the Business News Publishing Co. organization. I believe that the meeting will go a long way towards bringing the smaller organizations to a better understanding of the work which has been carried on by Nema.

F. B. RILEY,  
General manager.

### Good Meeting

Uniflow Mfg. Co.  
Erie, Pa.

July 24, 1933.

Editor:

I feel rather chagrined over not having written you or Mr. Cockrell sooner in appreciation of the fine courtesies and entertainment shown me while in Detroit at the refrigerator meeting.

You certainly did your share in sponsoring a good meeting and I enjoyed all the contacts made while there.

C. A. KUEBLER,  
President.

### Aims Achieved

Merchant & Evans Co.  
Manufacturers, Smelters,  
Importers, Jobbers

2035 Washington Ave., Philadelphia  
July 18, 1933.

Mr. Cockrell:

I have not had a chance before this date to write you to thank you and Mr. Taubeneck and in fact your whole staff for the lovely time I had in my brief stay in Detroit. Your hospitality was beyond compare, and certainly was greatly enjoyed by me. When I returned to Chicago bright and early the next morning by airplane, I kept a sharp look-out for that "Racing Demon" Taubeneck, but I guess he made his way through many hours earlier without trouble. However, after the banquet, I wasn't quite up to it to take that midnight ride.

I thought the conference couldn't have been more successful in achieving the aims desired. The plan of

functioning through the Nema organization produced by Messrs. Johnston and Ruthenburg completely fulfilled the preliminary necessities, as I saw them, and I was most happy to be able to march along with the "big fellows" in the industry.

I was greatly impressed by the virility of the personalities in the industry and I was especially struck by the youth, efficiency, and drive which stood out in connection with your own newspaper organization and staff. Let me congratulate you. It is a good omen for the future of the business that a paper such as yours has sprung into being and is being conducted by such young and vigorous fellows, really pioneers of what is in age, if not in size, an infant industry.

THOMAS EVANS,  
President.

### Glad You Came

Rex Mfg. Co.  
Connersville, Ind.

July 24, 1933.

Editor:

I wish to thank you, in behalf of our company, in the matter of your most generous entertainment of the writer and our secretary-treasurer, Mr. Ansted, when we were attending the Refrigeration Division meeting of the Nema in the Maccabees building a couple of weeks ago.

C. C. HULL,  
President.

### Excellent Handling

Bush Mfg. Co.  
Hartford, Conn.

July 11, 1933.

On the part of our company, I wish to compliment the NEWS on the excellent handling of the meeting of refrigeration executives last week.

C. T. BAPPLER,  
Sales manager.

### Regrets Absence

Johnson Motor Co.  
Waukegan, Ill.

July 19, 1933.

We regret very much that we were unable to attend the meeting scheduled for July 6 for the purpose of discussing effective means of functioning in cooperation with the provisions of the National Recovery Law.

We are anxious to know whether or not a code is in preparation for refrigerator manufacturers and ask that we be placed on your mailing list for this information.

C. P. ROSSBERG,  
Treasurer.

### What Readers Want to Know

"How dealers in very cheap refrigeration find service problems. Whether they are greater in proportion to lower prices."—Oblender & Co., 41 S. Queen St., Lancaster, Pa.

"Service and installations."—R. F. Bedard, Box 564, Middlebury, Vt.

"Compressor specifications of leading companies with their A.S.R.E. ratings."—Melville V. Schattman, 33 Ferdinand Pl., New Rochelle, N. Y.

"Would like to see monthly export shipment record published each month as shown for November."—Homer H. Hardy, 1030 Creighton Ave., Dayton.

"Refrigerants."—C. E. Sartoris, 5860 Kenmore Ave., Chicago.

"I think specifications on all boxes should be kept up to date. Keep on pounding for a return to quality merchandising."—C. T. Rice, 62 N. Audubon, Indianapolis, Ind.

"Selling and merchandising campaigns and ideas. Retail stove management."—Leigh Borden, Inc., 433 E. 12th St., Arc. Sta., Los Angeles, Calif.

"Display cases (refrigerators) and special dairy. One box with sliding doors perpendicular."—S. A. Termine, 172 Melrose St., Sta. A., Brooklyn, N. Y.

"Ice cream and commercial refrigeration and more of the expansion valve."—Eugene A. Thereux, R.F.D. No. 2, Watervliet, N. Y.

"Air conditioning and oil burners."—R. Thomas, Dewey St., Mechanicville, N. Y.

"Just continue up to the minute news of refrigeration developments."—H. A. Negus, 102 Central Ave., East Providence, R. I.

"Anything pertaining to service."—L. J. Baker, 819 McLean Ave., Royal Oak, Mich.

"Engineering."—Alvin Myhre, 320 E. Sixth St., Colorado, Tex.

"Oil burning refrigeration or rural refrigeration. I want an agency of this type of refrigerator."—M. F. Baker, 31 Castillo Ave., San Antonio, Tex.

"Salesmanship and service."—Hoyt M. Elliott, Shellrock, Iowa.

"Cabinet finishes."—G. W. Downs, 700 Sunset Ave., Evansville, Ind.



# Refrigeration Exhibit at "Century of Progress" Starts Controversy

## CRITICS SAY ADVERTISEMENT IS UNFAIR AND MISLEADING

REPORTS have been circulated in the industry, verbally and by mail, that the Grunow advertisement in the June 21 issue of ELECTRIC REFRIGERATION NEWS contains statements which are untrue. Competitors assert that the Grunow claim: "Wins First Honors at World's Fair Century of Progress" is not justified. They point to a letter presumed to have been written by C. W. Fitch, Director of Exhibits, to the Grunow Corp. in which that company is rebuked for making the claim in the News advertisement.

The News is asked to get the "true facts" concerning the exhibit in the Hall of Science and publish this information for the benefit of the industry.

We have been unable, up to the time of going to press, to get all of the facts needed to present a clear and comprehensive picture of the situation. On this page are given the complaints which have been put in writing and the answer of Duane Wanamaker, advertising director of the Grunow Corp. That part of the advertisement in question is reproduced together with telegrams and correspondence pertaining to it.

The telegram of inquiry sent to Mr. Grunow is based upon Mr. Driscoll's letter and verbal statements made by an advertising manager of a competitive company.

In the correspondence reference is made to two different letters supposedly written by C. W. Fitch. Originals, authenticated copies or confirmation by Mr. Fitch must be obtained before such letters can be published.

We do not yet know what part Mr. Fitch had, if any, in selecting the Grunow is based upon Mr. Driscoll's exhibit demonstrating the refrigeration cycle.

We do not know what representations were made to the Grunow Corp. by the management of the Fair when that company was asked to furnish equipment for the exhibit.

We do not know whether Mr. Fitch acted to protect the rights and regulations of the Fair or simply to placate indignant exhibitors who paid large fees for space to show their own products.

Lastly, we do not know what any other manufacturer would do if he found himself in a position to capitalize on an exclusive location in an atmosphere of scientific achievement.

For the present, at least, we are withholding our own opinions of the advertisement, with one exception. We will say this: The advertisement could have been written so as to create the effect apparently desired by the Grunow people without exposing it to the attack of competitors.

What would you have done if you had been in Mr. Wanamaker's position? What is your idea of "Truth in Advertising?" Opinions of readers are invited.

### "Your Duty to Publish the Facts"

Driscoll-Harrison Co.  
Successors to  
Hackensack-Harrison Co.  
323 Main St., Hackensack, N. J.  
July 12, 1933.

F. M. Cockrell, publisher:  
As a long and enthusiastic reader of ELECTRIC REFRIGERATION NEWS, and believing that their policy is in accord with that of the President of the United States, fair practice in manufacturing and advertising, I do believe that the truth of the Grunow advertising as pertaining to their honors, which they state has been conferred on them by the Chicago Century of Progress exposition, be exposed in your columns and the truth therefore be known.

I have read a copy of a letter supposed to have been sent to the Grunow company by the director of expositions of the World's Fair denying that they have received first honors. If this information is authentic I believe it is your duty to publish these facts.

F. H. DRISCOLL.

### Grunow's Side of the Argument Requested

Postal Telegraph  
July 17, 1933.

William Grunow, president,  
Grunow Corp.  
4127 George St., Chicago, Ill.  
Have received complaint that statements in your advertisement published in ELECTRIC REFRIGERATION NEWS June 21 are misleading and untrue, particu-

larly, and all the dealers of all other makes of electric refrigerators, I would like to suggest that you run a good, prominent article, which retracts the statements previously made by Grunow in advertising and publicity, giving the facts in connection with this. Since your publication speaks for the industry as a whole, I think they are entitled to the facts on this matter.

I believe, also, you carried the Grunow advertisement to which I refer, which, frankly, to my mind makes it doubly important that the true facts in regard to the situation be given to the industry.

I have wired Mr. Grunow requesting his side of the story and basis for making the statement and have also wired the Director of Exhibits to inquire regarding the authenticity of his letter.

The trouble about a situation of this kind is that once the fire gets started it is hard to put it out. Several of the large companies have been guilty of very questionable practices at vari-

ous times in the past and there is a problem of deciding who is to be judge and jury.

If the Industrial Recovery bill is carried out to its full possibilities it looks like we may have Uncle Sam to decide these questions. I have had a lot of them put up to me at various times in the past but usually they have been so involved and complicated that we could not undertake their solution.

Our general policy has been to let the industry fight its battles and make it our job to record the results. We have no hesitancy at all about reporting all such battles in full detail. We have hesitated to undertake the job of deciding who's right and who's wrong.

In brief, if someone is willing to come out and challenge the Grunow statement we shall be glad to report everything that happens from that point on. In other words we love a fight provided someone else does the fighting and we are left free to do the reporting. If we get into the fight ourselves, there is difficulty of becoming prejudiced in our reporting.

F. M. COCKRELL.

sensational new Grunow has shot up from nothing to \$100 a day—and still the cry for more comes by phone, wire and air mail! Carrene—the magic fluid refrigerant—has revolutionized refrigeration! A new deal for the public in safety! A new deal for you in sales and profits!

It puts you on a new competition! Lets you make a "showdown" demonstration of safety no other household refrigerator in the world can duplicate! Lets you keep your profits

### GRUNOW ALONE USES CARRENE

Non-Poisonous—Non-Corrosive—Non-Inflammable  
Non-Explosive—Under All Ordinary Conditions of Temperature and Pressure

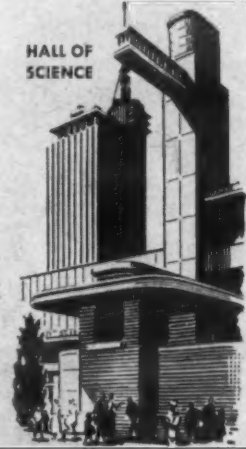
Here's super-safety you can prove to every prospect—actually opening the cooling unit to let them see, smell and hold in their hand the marvelous new refrigerant, Carrene. Think of it! This magic fluid is a liquid, not a gas! It operates with vacuum, not pressure! It's

Thirty-f  
selling eas  
sales and  
where. Do  
chise now,

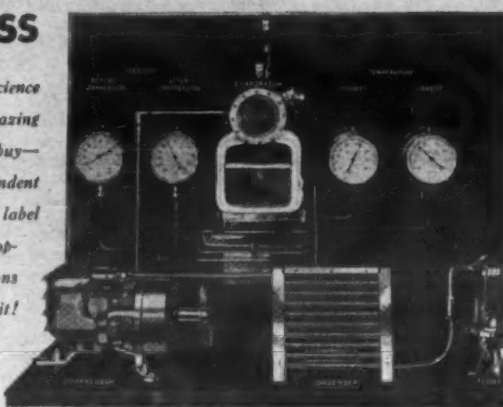
G  
41

## WINS FIRST HONORS AT WORLD'S FAIR CENTURY OF PROGRESS

The only refrigerator unit displayed in the Hall of Science at Chicago's Century of Progress Exposition is the amazing new Grunow! In the place of honor that money can't buy—awarded for merit and merit alone, by a jury of independent scientists—this sensational development carries the label "Grunow Electric Refrigerator....most modern development to date in electric refrigeration industry"! Millions will see it—your customers will come home and demand it!



**Grunow**  
SUPER-SAFE REFRIGERATOR



Portion of Grunow advertisement in June 21 issue of the News.

larly statement that Grunow refrigerator "Wins first honors at World Fair Century of Progress" and "Awarded for merit and merit alone by a jury of independent scientists." It is reported to us that Director of Exhibits has branded your claims false and that your refrigerator will be removed from the Century of Progress. Please let us have your side of the story, and basis for making statement, for publication in next week's issue.

F. M. COCKRELL.

### Check Up on Anonymous Letter

Postal Telegraph  
July 18, 1933.  
C. W. Fitch, Director of Exhibits,  
A Century of Progress, Chicago, Ill.  
We have received mimeographed copy of letter dated June 24 apparently written by you to Grunow Corp. but mailed in plain envelope and without definite indication of source. Please inform us by collect telegram if letter is authentic and if copies were distributed by you.

F. M. COCKRELL.

### Fitch Repudiates Statement Circulated

Postal Telegraph  
Century of Progress, Chicago, Ill.  
July 19, 1933.

F. M. Cockrell, publisher:  
I know nothing of the mimeographed copy of letter to Grunow Corp. sent to you. Copy this letter was given to representative refrigerating distributor by member of my staff but intended for his information only and not for distribution.

FITCH,  
Director of exhibits.

### News Policy to Report What Happens

Business News Publishing Co.  
July 19, 1933.

Mr. Driscoll:  
Replying to your letter of July 12,

### Industry Entitled To the Facts

Frigidaire Corp.  
Dayton, Ohio  
July 18, 1933.

Mr. Cockrell:  
You, of course, know the advertising and publicity that has recently been run by Grunow, on the point that, the Grunow refrigerator was the only one selected for the Hall of Science at the Century of Progress in Chicago.

This has stirred up quite a lot of discussion throughout the industry, because of the fact that it is, of course, incorrect and unfair to the rest of the industry.

We recently received a letter from Mr. C. W. Fitch, Director of Exhibits of the Century of Progress, a copy of which I am enclosing.

In the interests of the industry at

### Request for Original Letter

Business News Publishing Co.  
July 21, 1933.

Mr. H. W. Newell:  
Replying to your letter of July 18, I wired Mr. Grunow on July 17 and am attaching copy of this message. I have been informed by long distance telephone that we will receive a letter for publication as requested.

On July 18 I also wired C. W. Fitch, Director of Exhibits, as follows: (See copy reprinted above.)

Mr. Fitch replied as follows: (See copy reprinted above.)  
Considering the above reply from Mr. Fitch, I do not believe it will be advisable for us to publish his letter to Mr. Doty (copy of which was attached to your letter) without his approval, unless we have the original, with his signature for our files. Will you please furnish the original or have Mr. Fitch send a certified copy?

To save time at the moment I am sending you a copy of my letter of July 19 to Mr. F. H. Driscoll in which I have explained our attitude regarding matters of this kind. We are quite willing to publish your letter together with the statement by Mr. Fitch, but it is necessary that we take the precaution mentioned above.

F. M. COCKRELL.

### Permission to Publish Asked

Western Union, July 25, 1933.  
C. W. Fitch, Director of Exhibits  
A Century of Progress, Chicago, Ill.  
May we reprint your letter to E. D. Doty, Frigidaire Corp., regarding advertisement of electric refrigeration exhibitor in Hall of Science. Copy furnished to us by Frigidaire Corp. is undated. Please furnish date in answer by collect telegram.

F. M. COCKRELL.

Editor's Note: At the time of going to press we had not received replies from Mr. Newell or Mr. Fitch.

## GRUNOW DEFENDS CLAIM TO HONOR AT WORLD'S FAIR

Grunow Corp.  
4127-4153 George St., Chicago.  
Mr. Cockrell:  
July 18, 1933.

This will answer your letter of July 17 in which you ask us for the facts regarding our scientific display of Grunow refrigerating units in the Hall of Science at A Century of Progress. We say "units" because, as a matter of fact, we have three of these units operating in the Hall of Science.

One of them is operating right out in the open, largely under glass, to show to the public for the first time, visually, the complete cycle of refrigeration. The other two units are used for maintaining low temperatures in a biological exhibit, testing color effect of ultra-violet light in the synthetic ripening of fruits.

Unit Selected by  
Drs. Fulcher and Pearson

To begin with, the Grunow Corp. made no effort to put an exhibit in the Hall of Science. Two scientists connected with the World's Fair, Doctors Fulcher and Pearson, having their headquarters in the Hall of Science, approached us and after thoroughly investigating our method of household refrigeration, invited us to display our units in the Hall of Science as above stated.

There can scarcely be any question that these gentlemen had access to all other types of refrigerating units and could have selected any suited to their purpose. They chose Grunow units, despite the fact that no effort whatever, on our part, was made to influence their decision.

Space in the Hall of Science is not for sale. Each and every exhibit in this building was selected purely because of its scientific value, its illustration of progress and its value from an educational standpoint. It must be obvious then, to the most prejudiced mind, that the Grunow refrigerating units were chosen because they fulfilled these requirements and they were the only household refrigeration units to be placed in the Hall of Science, according to the best information we can obtain.

Says No Other Make  
Would Meet Requirements

No other unit excepting the Grunow could perform under the exact conditions necessary for visual display in the Hall of Science, because it is very apparent that with a unit requiring pressure, glass tubes and parts would not hold such pressure. Further, with a type of refrigerant possessing a bad odor and causing harmful effects if released, the dangers of accidents occurring in a crowded place and what might follow, are plain to be seen by any one.

On the other hand, since the Grunow refrigerating unit requires practically no pressure it could be shown and is being shown, largely under glass. Further, Carrene is a SAFE refrigerant that has most of the harmless properties of plain water and there is absolutely no danger of accidents occurring, with a probable panic resulting.

The Grunow Corp. felt that an honor was being conferred upon it by selecting its products for an exhibit that is purely scientific and that money could not purchase.

Asserts No Intention  
Of Mis-stating Facts

The Grunow Corp. has no intention whatever of mis-stating the facts regarding our Hall of Science installations. And no statements, which we consider in any way false, have been issued from this office. At the time our exhibits were installed no restrictions or instructions, relative to publicity, were given to us, and we have simply endeavored to give the facts about the honor conferred upon us, as they have presented themselves to us and must be apparent to any one else.

As a matter of fact, there apparently is no question in the mind of any one regarding the essential facts of our installations, their ability to perform under the most trying conditions and their exclusive use of a refrigerant which permits such performance.

The only serious objections seem to come from competition, who apparently are loath to have us inform the public regarding the SAFETY and PROGRESS illustrated by this modern scientific exhibit.

The Grunow refrigerating units are rendering 24-hour service in the Hall of Science, and as of this date, July 18, they are still working beautifully and attracting a tremendous amount of attention. From all the information we can secure there is absolutely no reason why they will not continue to occupy their places in the Hall of Science until the Fair comes to a close.

DUANE WANAMAKER,  
Advertising director.



## Carrying Charge Plan is Predominant In Pricing Retail Instalment Sales

NEW YORK CITY—Approximately 70 per cent of the retail furniture stores and virtually all the department stores included in an investigation of methods of pricing retail instalment sales made by the Policyholders Service Bureau of Metropolitan Life Insurance Co. were found to have adopted the carrying charge plan of pricing in some form.

In general, the survey revealed two plans in effect for pricing goods sold on the instalment plan. One of these is the "carrying charge" plan, and the other is designated as the "one price" or "instalment price" plan.

In the carrying charge plan, which was found to be predominant, a cash price is quoted on all merchandise and, when deferred payments are desired by the customer, a carrying charge, usually expressed in terms of a flat percentage, is added to cover the additional expenses involved. For the stores covered in the survey, this carrying charge averaged about one half of one per cent per month on the unpaid balance of the account.

### 'Instalment Price' Plan

Under the second plan, a flat instalment price is quoted, representing the total cost of the merchandise to the customer including the expense of extended payments over a specified number of months. Usually, in connection with this plan, a discount averaging around 10 per cent of the instalment price of the merchandise is allowed for cash within 30 to 60 days of the date of purchase.

The survey revealed that there are a number of factors entering into the determination of the price policy to be adopted in an individual organization. Those most frequently cited in the course of this survey as having a bearing on the decision might be summarized as follows:

1. Attitude of the customer.
2. Competition.
3. Type of store.
4. Influence of the manufacturer.

The attitude of the customer seems to have been the predominating influence in bringing about the adoption of the carrying charge plan, by many of the stores that recently installed this policy. Under this policy, it is claimed that each customer is charged in accordance with the manner in which he pays his bill.

Moreover, merchants advocating this plan are of the opinion that it offers greater elasticity in operation. If a customer fails to live up to the terms of his contract and falls behind one or several payments, it is possible to revise the terms by extending the payments over a longer period and the monthly carrying charge which is likewise extended serves to compensate for the additional cost involved.

This, in turn, serves to correct the

belief of many instalment customers that a fraction of the instalment price they have to pay represents the cost of some other customer's delinquency.

Executives seem to be of the opinion that the average customer is anxious to know the exact amount he has to pay for the privilege of buying on the instalment plan. The practice of quoting the carrying charge separately, they believe, meets this condition, since both the cash price and the exact amount charged for extended terms are definitely stated.

### Charge Only on Unpaid Balance

It is the practice of most stores to figure the carrying charge only on the unpaid balance of the contract so that the customer receives the benefit of the cash price for the amount of his down payment. This practice, it is claimed, has an additional sales appeal.

Moreover, if an account is paid up in full before the expiration of the contract period, the carrying charges stop and under such conditions most stores are careful to point out to the customer that he has paid only for the accommodation he has received.

Some stores have found it unwise, as a general rule, to advertise specific down payments and a specific number of payments unless the standard nature of the merchandise or the type of competition requires this to be done. Apparently, there are times when the sale to a customer on the regular extended payment terms would involve too much risk because of his credit status. However, if the terms are flexible so that a large down payment may be required, the store may feel justified in making the sale.

### Explanation of the Charge

Occasionally customers raise objection to the carrying charge at the usual rate of  $\frac{1}{4}$  per cent a month on the grounds that it is excessive. It is brought to the attention of the store that this actually amounts to much more than 6 per cent per year on the unpaid balance in view of the monthly repayment of the principal.

When a question of this kind is raised, it is the practice of one furniture store to admit readily that the charge is greater than the normal commercial bank rate of interest, but it points out also that it compares favorably with the rate charged for similar accommodation from other lending agencies.

Until the relatively recent introduction of the separate carrying charge, according to the survey, the instalment price policy was almost universally employed in connection with goods sold on a deferred payment basis.

It is perhaps of some significance to note that the instalment price policy

is most prevalent among the so-called "instalment houses" representing those stores in which a large proportion of the total volume of sales is on deferred payments.

Also it would seem that the type of community in which the store is located has some bearing on the policy in force. Thus, the instalment price plan was found in use most frequently by furniture stores in the smaller industrial towns and the outlying industrial districts of larger cities where a large proportion of the population would come within the category of the lower income groups.

### Factors Determining Policy

Some furniture dealers prefer the instalment price plan because a large number of their sales consist of so-called "add-on" business, in which an existing instalment contract is adjusted to provide for subsequent purchases. These houses claim that the necessary adjustment of the carrying charge under such conditions frequently is confusing to the customer and leads to dissatisfaction.

Apparently competition has been an important factor in determining the pricing policy adopted by many stores. Thus in several communities the fact that the majority of the merchants had adopted the carrying charge plan was reported as instrumental in influencing other department and furniture stores to discontinue their instalment price policies. Because of the difference in the quoted price for identical merchandise under the two plans, these stores feared that to continue to advertise instalment prices would place them at a definite competitive disadvantage and lead to considerable loss of goodwill.

### Department Store Methods

This survey indicated that a majority of the department stores are using the carrying charge plan in those departments selling on a deferred payment basis. This policy seems to be influenced somewhat by a desire on the part of the store to maintain a somewhat uniform policy throughout the establishment.

Instalment sales, of course, are limited to certain departments, and customers patronizing these departments also may be buying in other departments of the store. Several department store executives, commenting on this point, were of the opinion that the pricing of all merchandise at a cash price and the addition of a carrying charge for deferred payment sales, permitted a uniform pricing policy throughout the store, and served to prevent confusion in the mind of the customer buying on both the open account and the deferred payment basis.

One reason frequently advanced for the adoption of the carrying charge plan in many stores is to conform to the policies and practices of certain manufacturers. Usually these stores handle a number of mechanical lines such as refrigerators, radios, vacuum cleaners, etc., in addition to the regular line of furniture.

### Manufacturers' Policy a Factor

In many cases, the manufacturers of these products have established a nationally-advertised policy involving a standard price with a uniform carrying charge for sales on deferred items. Frequently, the manufacturer requires that these terms be strictly adhered to, irrespective of the policy in effect in the individual store.

When there is a considerable volume of this type of merchandise sold for other price basis, some stores have found that a variation in price policy for other merchandise frequently would tend to confuse the customer. Consequently, the carrying charge plan was adopted in order that all goods might be sold on the same basis.

An example of the cooperative development and adoption of a uniform pricing policy for deferred payment sales is furnished by the Retail Furniture Dealers' Association of Oregon.

As the name implies, this is an association of retail furniture dealers operating in the State of Oregon; its membership is reported to account for practically 95 per cent of the retail furniture business conducted in that state.

### The Oregon Plan

After a careful investigation of the subject by a specially designed committee, this organization officially went on record as advocating the adoption of a carrying charge plan by its members. The plan, involving a standard carrying charge of one half of one per cent per month over the cash price, was officially adopted by the association on Jan. 1, 1929.

The actual working of the plan in its application to a specific case was described by the chairman of the committee as follows:

"If there is a sale of \$120, upon which a down payment of \$20 is the first payment, and the remainder is to be made at the rate of \$10 per month, the carrying charge will then be one-half of one per cent per month on the balance, in other words, 50 cents per month on a non-declining basis. This yields slightly less than 11 per cent simple rate of interest and is an integral part of the purchase price. The reason for that is that, had the charge been made as an interest

charge, it would have been void because the rate of usury in Oregon is anything over 10 per cent.

"When payments are missed, a charge of 6 per cent simple interest is made on delinquent payments until they are paid. In cases where purchases are made that are added to the original contract, the carrying charge is computed in somewhat the same manner.

"All the dealers in the Oregon association quote the cash price only. Furthermore, there is no discount from this cash price and the policy has proved so uniformly satisfactory that we do not think that it is very probable that it will be changed. Our customers really prefer the carrying charge to the old way, because they know now that they are getting the cash price.

"Formerly there was always a suspicion that when the same price for time as for cash was asked, there was an undetermined amount added to the price to compensate the merchant for the use of his money. Then also, a number of our merchants would give a further discount for cash to appease the cash customer who claimed that he was paying for credit losses. We take great care to explain the exact amount per month that is paid by the customer, working it out in its dollars and cents value rather than the percentage value."

### Computing the Charge

The survey develops the fact that there are a variety of practices in use with respect to the basis on which the carrying charge is computed and the methods used in the collection of this extra charge. About two-thirds of all stores contributing to the study make a flat charge of one-half of one per cent per month on the unpaid balance for the service of carrying the account. The majority of the stores reporting, make this charge on a non-reducing basis which is equivalent to slightly less than 11 per cent in terms of simple interest considering the monthly repayment of the contract.

A variation of the general plan of figuring the service charge as outlined in the preceding paragraph was reported by a number of stores. These stores compute the carrying charge at the end of each month on the unpaid balance of the contract, which results in a reducing charge each month. This method entails more office work on the part of the stores, but those using it consider it the only fair method of computing the charge from the customer's standpoint.

### Wide Variety of Practices

One store makes a flat charge of \$2 for each \$100 worth of merchandise purchased on deferred payment terms, payment extending over a period of 10 months.

Other stores have developed a graduated scale of percentages based on the length of time covered by the contract. An illustration of this is furnished in the following schedule of charges employed by a Minneapolis department store: 2 per cent if paid within 6 months, 3 per cent if paid within 9 months, 4 per cent if paid within 12

months, 5 per cent if paid within 15 months, 6 per cent if paid within 18 months.

A department store in Baltimore follows the practice of cancelling the carrying charge for the first 6 months if full payment is made within that time, but otherwise makes a charge of 1½ per cent of the deferred payment balance for the first seven months' period and one-half of 1 per cent for each month following.

A number of minor variations in the application of the carrying charge plan were found in the course of this survey. For example: one furniture company in Omaha, Nebraska, makes a practice of omitting the carrying charge if the account is paid within a period of 90 days from date of purchase.

"This policy," the controller of the company writes, "has been in use for several years and we feel has been very successful. We find quite a number of customers will take advantage of having the finance charge cancelled by paying their accounts within 90 days, even though they have originally signed a contract for a period of from 10 to 12 months. The customer can see the exact amount of saving by so paying the account."

### Collecting the Charge

It seems to be the customary practice to prorate the carrying charge over the life of the contract and to collect it piece-meal with each month's instalment. However, a few instances were cited where the customer was required to pay the full amount of the carrying charge along with the down payment at the time of making the purchase. Usually, under such a plan, if an account is paid up before the expiration of the terms, the unearned portion of the carrying charge is refunded.

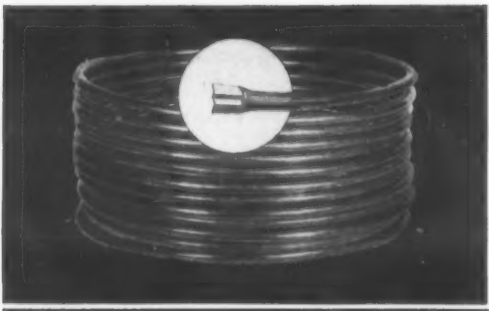
Several retailers testified to the importance of fully informing the customer on the details of the plan in effect, including an explanation of the basis on which the carrying charge or instalment price has been computed, and the manner in which payments are to be made.

One executive who stressed this point considers this practice the best method of anticipating and forestalling subsequent objections to the carrying charge on the part of the customers after the account has been well established and is nearing maturity. Apparently, many customers who have not had an adequate exposition of the plan, assume that the final payment under the contract constitutes the carrying charge and attempt to withhold this payment.

## HOME FURNISHINGS SHOW OPENS JULY 31

CHICAGO—Scheduled for July 31 to Aug. 12 on the fourteenth and fifteenth floors of the Merchandise Mart here is the semi-annual Home Furnishings and Electrical Appliance exposition. Exhibits in these fields will occupy 400,000 sq. ft. of floor space, and approximately 85 lines of appliances and furnishings will be shown to the public.

## You Want It ... QUICK!



It is the rule of this plant that orders for tubing from stock are shipped the day received. This has saved many of our customers the necessity of picking up unknown tubing to save time. You wire—and we ship—Quick! You should—and can—always have the benefit of Wolverine Quality. 100% Dehydrated and Sealed—or Open End—Plain or Tin Plated—in 25, 50 and 100 ft. coils from stock—longer lengths to order. WOLVERINE TUBE COMPANY, 1491 Central Ave., Detroit, Michigan. Sales Offices in 29 cities. Export Dept., H. M. Robins Company, 120 Madison Ave., Detroit.

# WOLVERINE

Seamless Copper Tubing  
For Refrigeration



One of the laboratories of Virginia Smelting Co., West Norfolk, Va., in which Extra Dry Esotoo is carefully tested before shipment.

### 36 CONVENIENT SERVICE STATIONS

No delay in filling orders from nearby stocks. Write for list of Service Stations. There is one near you.

**VIRGINIA SMELTING COMPANY**  
West Norfolk  
Virginia

F. A. Eustis, Sec., 131 State St., Boston and 76 Beaver St., New York.

THROUGH every stage of production, from laboratory to tank, Extra Dry ESOTOO is rigorously safeguarded from contaminating or deteriorating influences that would tend to lower the high standard of purity, dryness and uniformity that has made Esotoo America's safest, most dependable refrigerator.

Write, wire or cable us for further facts or information on Extra Dry Esotoo. Cable Address: Eustis Boston.

# EXTRA DRY ESOTOO

TRADE MARK. REG'D U.S. PAT. OFF.



## SERVICE

### Independent Service Business Best In Early Summer Months

By Elston D. Herron

DETROIT—"If it weren't for the dissatisfied customers of large manufacturers' branches and distributors, there would be no independent service business."

This was one of the remarks made by E. A. Mayrend of Mercier & Clark, Inc., independent service company here, during a conversation with a News reporter last week.

"Of course," Mr. Mayrend continued, "there would be some business serving a few obscure makes of equipment, but the greatest volume of our work comes from people who call an independent for no other reason—as nearly as we can tell—than that they don't like the treatment they have had from manufacturer's sales and service organizations."

Mercier & Clark has seven service men in its employ at the present time, and had temporarily dismissed three other men the week preceding the interview with Mr. Mayrend. Asked why men should be laid off during the mid-summer season, Mr. Mayrend explained:

"July and August are not particularly good months for our company, but May and June are usually so good that we have to turn down quite a lot of calls. During May and June, housewives, apartment house owners, and proprietors of commercial establishments want to get their refrigeration equipment in good shape for the hot months, and all of them seem to call in at once."

"Then there is a lull for a couple of months, because most of the equipment in the city is tip-top. So in July and August, most of our work comes from persons whose equipment has broken suddenly—there is little general overhauling and adjustment work during those months."

In winter, the company's business falls to less than a third of the

summer volume, and Mr. Mayrend remarked that the organization's contract work during those months is a veritable life saver.

Mr. Mayrend believes that users of electric refrigeration are becoming less and less inclined to turn their systems off during the winter months, and attribute this tendency to the educational work being done in this field by manufacturers.

"Doesn't the seasonal nature of your business make your employment problem pretty difficult?" Mr. Mayrend was asked.

His answer was this: "No. Most service men, we find, like working for an independent company just as well as, if not better than, for a distributor or factory branch. When they work for an independent, they feel that they are more individuals than numbers on the payroll of a corporation."

#### Will be Re-hired

"They understand perfectly that we will hire them when we have enough work to warrant their employment, and that they will be laid off when our volume falls. They realize that steadiness of employment would be just as uncertain with a branch or distributor."

"Just how," came the question, "do these service men get through the winter?"

Most of them, Mr. Mayrend explained, fully expect to go into debt during the winter months—but not to a great extent, because they usually do free lance service work all winter long.

"Practically all of our men spend the winter making cold canvass service calls. They pick up a small job here and there, and can usually make \$8 or \$10 a week. Almost without exception, the men we employ during the spring-to-fall season make no attempt to chisel with our customers in the winter."

#### Odd Service Jobs in Winter

"We have no ill feeling toward our men for getting winter business that way. They can afford to take less for their work than we could, because they have no overhead to carry, and the service jobs they get would probably not be done at all unless the owners were sold on the idea by the visiting service man."

It is Mr. Mayrend's opinion that the average independent service man has to be a better all-round refrigeration expert than the man working in the service department of a distributorship or branch. The independent company's employees have to understand a considerable number of refrigeration systems, while employees of a distributing organization need to know about only one make, as a general rule.

#### "Independents Growing In Importance"

Commenting upon the fact that some manufacturers are quite amiable toward independent service companies, while others remain definitely antagonistic toward them, Mr. Mayrend said, "Whether they like it or not, manufacturers are realizing that independent service organizations are becoming increasingly important in the field of electric refrigeration."

This man feels that some independent service companies make a great mistake in attempting to do work for which they are not fully qualified and trained. "Take ammonia work, for instance," he said. "We don't know much about ammonia systems, and we might make a bad name for ourselves if we tried to repair an ammonia machine, and bungled the job."

"Instead—when someone calls in for ammonia work—we recommend him to the Euth-Lambrecht Co. here, which specializes in service on ammonia systems. In turn, the Euth company refers customers to us for some kinds of small machine service. It has been our experience that such cooperation pays in more ways than one."

Mercier & Clark has not done a great deal of service work on beer-cooling systems in Detroit yet—one reason being that a goodly number of the coolers installed in this city so far use ice for refrigeration.

This doesn't worry Mr. Mayrend, however. He believes that many proprietors of beer-dispensing establishments are using ice only to avoid the expenditure of a large sum of money at the outset of their business, that they will install electric refrigeration in their bars if they find that there is sufficient profit in beer to warrant their staying in business.

## Creamery Devises Special Methods Of Rebuilding Ice Cream Cabinets

By John T. Schaefer

DETROIT—To improve the ice cream cabinet service furnished to its many vendors of ice cream in Detroit and environs, Detroit Creamery service department has devised a number of useful methods of rebuilding and repairing ice cream cabinets.

Under the direction of Fred Sinz, service manager, this department maintains some three thousand ice cream cabinets in the field. This includes cabinets used by customers of the Arctic Dairy Products Co., which like Detroit Creamery, is a unit of the National Dairies Co.

The service department is located on the second floor of the Detroit Creamery building at Fifth and Pine Sts. Installation trucks are driven right up into the department where they are equipped and loaded with reconditioned cabinets each morning.

#### Fast Service for Ice Cream

Because of the tendency of ice cream to soften as soon as temperatures begin to rise due to lack of refrigeration, the organization aims to provide service within an hour after a phone call is received reporting trouble.

Less urgent calls which require simply control adjustments to raise or lower the temperature do not get "service within the hour," of course, but whenever a customer is losing refrigeration there is no delay in getting a service man out on the job. A night man attends to the urgent calls in the night hours.

The territory is covered by three motor trucks, each handling either service or installation. Men in the field phone in each hour to report their activities, and get word of new calls.

The shop is arranged with workbenches on each side, a refrigerant still room and cleaning and scrubbing equipment at one end, a storage rack for ice cream cabinets in the center of the large room, brine-cooling apparatus near one end, office, and a tin shop beyond.

#### Workmen Specialize

The various workmen specialize in one or two operations—electrical testing and repair, compressor rebuilding, cleaning, adjustment, operation of the still, etc. so that to some extent factory production methods are employed, according to L. E. Charters, shop superintendent.

A small machine shop makes it possible to rebuild or manufacture new parts from the stock of brass and steel which is maintained, the management finding it more economical in many cases to make its own parts instead of buying outside.

Nizer float valves, for instance, are entirely rebuilt when they come in for repair. The old Nizer floats, Detroit Creamery men find, have a tendency to get wobbly with usage so that control of refrigerant flow is uncertain. So they cut down the length of the float to a ball shape and install new stainless steel needles and valve seats with a simplified construction in place of the old ball valve.

Rebuilt float valves are then tested for distance of movement and general mechanical action on a special rack, and adjusted for metering of refrigerant in enclosed fixture with a window in the top which shows the actual flow of liquid.

#### Undercutting Commutators

An operation not found in many service shops is undercutting the motor commutators. The mica insulation between segments of the commutator, being a harder material than the copper segments, wears slower, causing ridges of mica after considerable service, and resulting in sparking at the brushes. Detroit Creamery avoids this sparking by undercutting the commutator, along the insulation. This is done with a small motor-driven steel cutting disk.

Another electrical test is in the "growler," a device which is actually three legs of a transformer. The operator lays an armature in place of the fourth leg, turns on the current in the growler, and feels for any short-circuited coils with a knife blade or hack-saw blade. A short circuit will be evidenced by vibration of the feeler.

Two thorough operating tests are made of complete ice cream cabinet assemblies. First is done as a cabinet is brought into the shop from the field, when an analysis of its condition is made to see what work needs to be done. The other is when a cabinet has been reconditioned, and it must operate properly before it is stored with the other reconditioned equipment.

The first test determines whether the compressor, motor, controls, water valves, cabinet insulation, or float valves need attention. The cabinet then gets a cleaning—sleeves are flushed with Wyandotte cleaner, brushed with a portable motor-driven wire brush, lids brushed, buffed, and straightened, etc.

Condenser coils, copper and brass

connectors, and fittings are given a "bright dip" which includes dipping successively in vats of boiling caustic soda solution, boiling water, nitric acid, a water rinse, sulphuric acid, and a final water rinse.

The final test, after a cabinet has been rebuilt, includes a 24-hour run with controls set to cycle between a vacuum of 2 to 16 in. to give a sleeve temperature of about zero. Temperature and cycling are recorded on charts. Cabinets are charged with brine for the operating test, but are stored without brine because when a cabinet is sent out it is filled with cold brine in order to give the customer rapid refrigeration.

The Nizer cabinets used by Detroit Creamery have alcohol brine, while the Frigidaire cabinets are built for calcium chloride. These brines are mixed and cooled to 15° below zero in two specially built brine-cooling tanks (one for each type of brine). A 1-hp. Frigidaire machine cools the 200 gals. of calcium brine, while the 400-gal. tank of alcohol is cooled by two Nizer machines. A small electric pump fills the tanks of each cabinet.

In Detroit Creamery tin shop, which is operated in connection with the service department, repair work is done on sleeves, rings of lids, sleeves, liners for soda fountains, and cooling units for refrigerated trucks.

Refrigerated trucks operated by the company are cooled by cold brine which is first refrigerated in the large central refrigerating system in the milk plant. The cooling units are sheet metal tanks with cooling fins between "wells" of brine. They are filled through a large hatch on the top of the truck.

**PATENTS**  
Searches, Reports, Opinions by a  
Specialist in REFRIGERATION  
**H. R. VAN DEVENTER**  
Solicitor of Patents - Refrigeration Engineer  
342 MADISON AVE. NEW YORK

### Testing Service for Domestic and Commercial Electric Refrigeration

Testing and experimental laboratory service for Manufacturer, Distributor, Central Station. Test data exclusive property of client.

**Electrical Testing Laboratories**  
80th St. & East End Ave.  
New York

### Filtrine Water Coolers STORAGE-DRY SYSTEM

DUE TO STORAGE RESERVE, chilled water is always available to meet "peak loads," in excess of condensing unit hourly capacity. DIRECT CONTACT COOLING. Extra heavy, steel pipe, evaporator expansion coil submerged in drinking water effects instant heat transfer. Strength of coils eliminates possibility of refrigerant getting into drinking water or water into refrigerant.

**Steel Pipe Coils**  
DEHYDRATED-CLEANED  
**Filtrine Mfg. Co.**  
Brooklyn, N. Y.

## REDUCE PRODUCTION COSTS: ASSEMBLE YOUR PRODUCT by



**Electric HYDROGEN WELDING**

THIS new, yet thoroughly proven assembly process, is the means of important savings, not only in assembly, but in materials and labor as well. By simple changes in design to adapt your products to this volume-production welding method, you may replace heavy, expensive castings and forgings by such simple and inexpensive units as stampings, drawn-shapes, bar stock, screw machine products, etc. You may take advantage of the fact that this is welding on a quantity production basis. As many as a thousand pieces may be welded at one time!

The welds have been proven to be as strong as the steel in the parts welded together, and what is still more important to the refrigeration industry, the welds are absolutely gas tight. Welded assemblies emerge from the reducing atmospheres of the furnace absolutely clean and free from oxides both inside and outside.

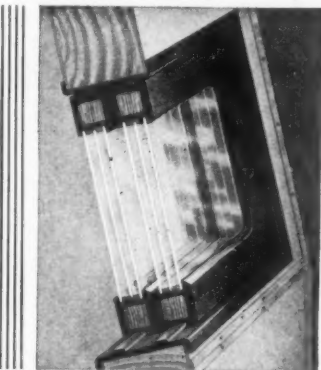
The use of hydrogen electric welding requires no equipment investment on your part. The huge electric welding furnace at the Bundy plant is at your service. You have only to furnish your parts machined for a snug fit (or assembled if you wish); or Bundy will furnish complete units produced to your specifications.

Complete information covering this revolutionary process will be gladly furnished. Send us your prints and specifications for quotation.

## BUNDY TUBING COMPANY

4815 Bellevue Ave.

Detroit, Mich.



The use of reinforcing, laminated, ply-wood core sealed by vulcanization entirely within  
**ACE HARD RUBBER DOORS FOR REFRIGERATED DISPLAY CABINETS**  
prevents warping and swelling.

Complete catalogue and prices on request

**AMERICAN HARD RUBBER COMPANY**  
New York, N. Y. Akron, Ohio  
111 West Washington St., Chicago, Ill.



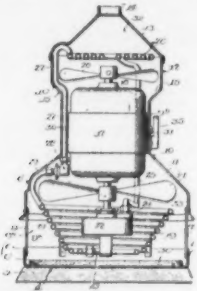


## PATENTS

ISSUED JULY 11, 1933

1,917,537. AIR COOLER. Lee W. Melcher, Winnetka, Ill. Filed Aug. 1, 1930. Serial No. 472,861. 10 Claims. (Cl. 62-129.)

1. In an air cooler, the combination of a refrigerating unit comprising a compressor, an expansion coil, a condenser, and



1,917,537

an electric motor having a vertically extending shaft connected to drive the compressor, a unitary casing for said unit provided with air inlets and outlets, and comprising a chamber above the motor and a chamber below the motor in which the condenser and expansion coil are disposed respectively, and a pair of fans for forcing air through said chambers connected to be driven by the motor.

1,917,534. ICE RINK STRUCTURE. Martin R. Carpenter, Chicago, Ill. Filed Sept. 8, 1930. Serial No. 480,323. 23 Claims. (Cl. 62-12.)

1. In an ice skating rink floor structure the combination of a plurality of laterally spaced stringers, a plurality of closely adjoining pipes supported by the stringers, a one piece monolithic composition slab

extending throughout the entire area of the skating floor and having the pipes and stringers embedded therein, and supporting means on which the slab is horizontally movable.

1,917,667. EVAPORATOR. Franklin G. Slagel, Buffalo, N. Y., assignor to Fedders Mfg. Co., Inc., Buffalo, N. Y., a Corporation of New York. Filed April 17, 1930. Serial No. 445,119. 7 Claims. (Cl. 62-126.)

3. In an evaporator for refrigerating systems, a container, means for maintaining a substantially constant body of liquid refrigerant in the container, a superposed chamber in open communication with the container, an outlet conduit leading from the container and separate duct means in open communication with the liquid refrigerant in the container and with the outlet conduit leading from the chamber.

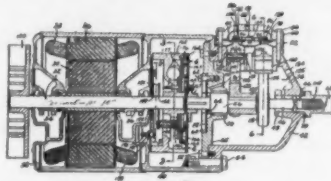
1,917,751. GAS BURNING APPLIANCE FOR ABSORPTION REFRIGERATORS. Lee S. Chadwick, Shaker Heights Village, Marc Resek, Cleveland Heights, and Wilbur G. Midnight, Cleveland, Ohio, assignors to Perfection Stove Co., Cleveland, Ohio, a Corporation of Ohio. Filed May 31, 1930. Serial No. 457,881. 23 Claims. (Cl. 62-5.)

1. A gas burning appliance for absorption refrigerators comprising a burner, a valve for controlling the delivery of gas to the burner, a spring tending to close the valve, means shiftable in one direction transversely of the line of movement of the valve for holding the valve open against the tension of the spring and shiftable through and beyond said line in the opposite direction to permit said spring to close the valve, and thermostatic mechanism arranged to be subjected to the temperature of the generator of the refrigerator for shifting said means in said opposite direction.

1,917,760. PUMP FOR REFRIGERATING APPARATUS. Carl F. Geiger, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed Dec. 31, 1929. Serial No. 417,799. Renewed Nov. 23, 1932. 4 Claims. (Cl. 230-58.)

1. A motor-compressor unit comprising a motor having a shaft, a starting winding and a running winding for said motor, a compressor having a drive shaft in sub-

stantial alignment with said motor shaft, a clutch for operatively connecting said



1,917,760

shafts, and means associated with said clutch for disconnecting said starting winding when the speed of the motor attains a predetermined high value, and means compensating for any slight irregularity in the alignment of said shafts.

1,917,865. REFRIGERATING APPARATUS FOR RAILWAY CARS. Edward C. Wood, Evanston, Ill., assignor to North American Car Corp., Chicago, Ill., a Corporation of Illinois. Filed Jan. 18, 1932. Serial No. 587,215. 4 Claims. (Cl. 62-91.5.)

1. In a refrigerating apparatus, a compartment to be refrigerated, a closed container in the compartment for confining solidified carbon dioxide, a fan for circulating air within the compartment in contact with the container, a fluid-pressure motor for driving the fan, a conduit for carbon dioxide gas leading from the container to the motor, and a cooling coil within the compartment having its inlet connected with the outlet of the motor, and its discharge end leading outside of the compartment.

1,917,866. REFRIGERATOR CAR. Edward C. Wood, Highland Park, Ill., assignor to North American Car Corp., Chicago, Ill., a Corporation of Illinois. Filed July 11, 1932. Serial No. 621,909. 18 Claims. (Cl. 62-91.5.)

1. In a refrigerator car, a main compartment to be refrigerated, a closed container for confining a quantity of refrigerant which when heat is absorbed thereby evolves gas, a passage through which air may be circulated in contact with the container, said passage having inlet and outlet openings communicating with the main compartment, a closure for one of the openings, and means actuated by fluid under pressure developed in the container for operating the closure.

1,917,873. REFRIGERATOR. Edmund D. Campbell, University City, and William F. Dietrichson, Webster Groves, Mo. Filed March 27, 1930. Serial No. 439,374. 8 Claims. (Cl. 62-91.5.)

1. A refrigerator comprising a body having an insulated compartment therein, a metal container fitting said compartment, a closed box secured in the upper part of the container and holding solid carbon dioxide, and a duct extending around the container with portions thereof embedded in the insulation of the compartment whereby to restrain the container against shifting, the ends of said duct opening into said box.

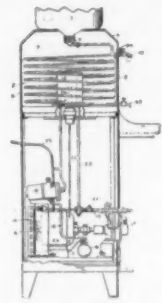
1,917,877. RAILWAY CAR. William F. Dietrichson, Webster Groves, Mo., assignor

to American Car & Foundry Securities Corp., Wilmington, Del., a Corporation of Delaware. Filed May 28, 1930. Serial No. 456,488. 28 Claims. (Cl. 62-91.5.)

1. In a railway car, a car body, a car roof, longitudinally extending closed conduits holding solid carbon dioxide secured to the car roof adjacent the sides of the latter, transversely extending conduits connecting said longitudinally extending conduits, and vent means extending from the transversely extending conduits through the car roof for permitting escape of gas outside the car.

1,917,927. BEVERAGE COOLING APPARATUS. Albert C. Denslow, New York, N. Y., assignor to Staten Island Shipbuilding Co., Staten Island, N. Y., a Corporation of New York. Filed Feb. 1, 1929. Serial No. 336,748. 4 Claims. (Cl. 62-141.)

1. In a beverage cooler adapted to removably support inverted vessels containing liquid to be chilled, the combination



1,917,927

of a liquid receptacle partially filled with liquid, a conduit coiled adjacent the inner periphery thereof and terminating with an inlet adapted to receive the mouth of an inverted vessel, said conduit having a plurality of faucets communicating therewith at spaced points, a portion of said conduit between said faucets being immersed in said liquid, and a refrigerating dome disposed in the base of said receptacle and adapted to chill the beverage in said coiled conduit through said liquid in the receptacle.

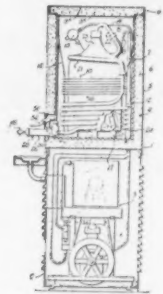
1,918,046. COOLING CHEST FOR FOODSTUFFS. Julien Loeb, Brooklyn, N. Y. Filed Jan. 6, 1933. Serial No. 650,397. 2 Claims. (Cl. 62-80.)

1. In combination with an automatic refrigerator having an ice-forming compartment and a plurality of sectional trays therein, each adapted to hold water frozen into ice cubes by the refrigerator, of a cooling chest comprising a closed heat-insulated walled casing provided with a front wall formed as a hinged door, a rack carried by the chest and a tray for containing ice cubes received by said rack the tray being interchangeable with a tray of ice cubes in said refrigerator, and being held by the rack spaced from the top wall of the casing.

1,918,131. WATER COOLER. Guy S. Ranstead, Waukesha, Wis. Filed April 24

1929. Serial No. 357,665. 5 Claims. (Cl. 62-141.)

1. A device for use in cooling and dispensing water and comprising a heat insulated casing having a cooling chamber adapted to receive a water container in



1,918,131

upright position, means for cooling said chamber, a water cooling coil disposed in said chamber, means affording communication between one end of the coil and the water in the container and means connected to the other end of the coil for dispensing water therefrom and comprising a pump having a valve controlled inlet connected to the coil, a nozzle and a valve controlled outlet between the pump and the nozzle.

## MELLOWES SUING FRIGIDAIRE ON EVAPORATOR PATENT

MILWAUKEE—Claiming infringement of patent No. 1,847,057 and re-issue patent No. 18,851, a suit has just been entered against Frigidaire Corp. by A. W. Mellowes and E. B. H. Tower, joint owners of the patents, in the U. S. District Court of the eastern district of Wisconsin, in equity No. 4117.

The patent pertains to a household refrigerator evaporator in which an oil separator returns oil to the compressor. The original patent, No. 1,847,057, was granted on Feb. 23, 1932, to Mr. Mellowes and Mr. Tower. Re-issue patent No. 18,851 was granted on May 30, 1933, in response to an application made because the original patent was in part inoperative because of an insufficient specification.

## FRIGIDAIRE INSTITUTES SUIT AGAINST STARR DEALER ON 'TAG' CONTROL

DAVENPORT, Iowa—A patent suit has been instituted against Fred W. Adams, a Starr Freeze dealer doing business as Adams & Adams here, alleging infringement of Frigidaire's cold control patent No. 1,658,323, issued on Feb. 7, 1928, to Floyd Blackmore. The bill of complaint was filed March 16, in equity No. 4125, in the U. S. District Court, southern district of Iowa, Davenport division.

This is the patent which Judge Dewey of the U. S. District Court at Des Moines upheld last fall in the suit against a Grigsby-Grunow dealer (see ELECTRIC REFRIGERATION NEWS, Oct. 5, 1932), and upon which Frigidaire bases its cold control licensing agreement (announced in ELECTRIC REFRIGERATION NEWS on Dec. 14, 1932).

C. J. Tagliabue Mfg. Co. of Brooklyn, maker of the control used on the Starr refrigerator, is to defend the suit.

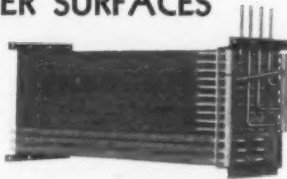
## YOUNG HEAT TRANSFER SURFACES

Cooling and Heating cores for all air conditioning applications.

Young engineers can help you whether you use water, brine, or direct expansion gases as refrigerants. Hot water or steam for heating.

Pacific Coast Rep. W. H. Benduhn 664 Mission St. San Francisco, Calif.

Mountain States Rep. L. O. Stratton Co. 1025 Broadway Denver, Colo.



Evaporator for direct expansion air conditioning unit.

YOUNG RADIATOR CO., Racine, Wisconsin

## Quick Service Speeds Sales

### —The Larkin Plan

## To Help You

Now Over 40,000 Larkin Coils in Daily Use

QUICK delivery of Coils—from 12 to 24 hours to points East of the Rockies is a LARKIN feature made possible by Warehouses at Atlanta, Brooklyn and Chicago where complete stocks of 124 Standard Models and Sizes LARKIN Original 100% Vertical Surface Aluminum Plate Coils are available.

Distributors and dealers can make arrangements for this convenient service through manufacturers listed here.

## WAREHOUSES

Brooklyn - Chicago

## STANDARD FACTORY EQUIPMENT WITH

COPELAND : SERVEL : WILLIAMS ICE-O-MATIC : MAYFLOWER : UNIVERSAL : KULAIR : ZEROZONE : M & E : MODERN : STARR : MOHAWK : DICHLER : LIBERTY : H. M. Robins Co., Export and Others.

## LARKIN

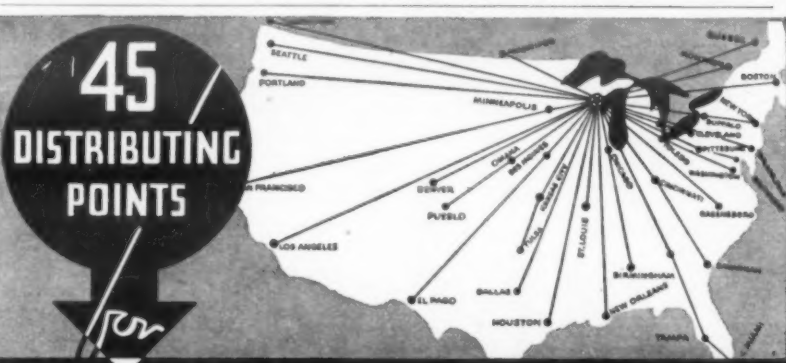
Refrigerating Corporation

Originator and Manufacturers

ATLANTA, GA., U.S.A.

U.S. PATENT No. 1,774,238

LARKIN COILS



45 DISTRIBUTING POINTS

ANSUL ANHYDROUS ANALYZED SULPHUR DIOXIDE

ANSUL CHEMICAL COMPANY • MARINETTE • WIS

## Exports of Electric Refrigerators

May, 1933 Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators	Electric Commercial Refrigerators Up to 1 Ton	Parts for Electric Refrigerators
	Number	Value	Value
Austria	21	\$ 1,029	\$ 415
Belgium	173	12,440	10,424
Czechoslovakia	...	...	5,431
Denmark	...	...	399
Estonia	...	...	62
Finland	12	663	497
France	960	47,150	76,292
Germany	239	10,088	20,767
Greece	3	569	658
Irish Free State	3	199	7,375
Italy	275	14,264	4,430
Malta, Gozo, and Cyprus	1	57	7
Netherlands	102	7,933	4,911
Norway	37	3,372	1,431
Poland and Danzig	1	62	...
Portugal	9	906	157
Rumania	4	554	197
Spain	126	8,003	3,303
Sweden	112	6,489	3,335
Switzerland	318	13,365	9,268
United Kingdom	1,843	58,515	46,738
Yugoslavia	16	778	55
Canada	530	34,961	8,307
Costa Rica	8	654	...
Guatemala	...	...	38
Honduras	...	...	25
Nicaragua	1	88	...
Panama	20	2,655	500
Salvador	10	784	...
Mexico	183	17,173	3,668
Bermuda	22	2,006	607
Barbados	...	...	...
Jamaica	2	222	...
Trinidad and Tobago	3	191	...
Other British West Indies	13	735	...
Cuba	108	10,403	621
Dominican Republic	2	384	...
Netherland West Indies	13	1,215	197
French West Indies	4	688	...
Haiti, Republic of	...	...	179
Virgin Islands of U. S.	3	410	...
Argentina	38	2,965	874
Brazil	139	13,506	955
Chile	1	143	...
Colombia	39	3,316	...
Surinam	1	230	...
Peru	1	80	...
Uruguay	2	141	...
Venezuela	10	921	621
Aden	1	65	...
British India	165	12,770	2,444
British Malaya	42	4,334	290
Ceylon	1	...	212
China	74	7,287	...
Netherland East Indies	79	8,566	4,858
French Indo-China	...	...	...
Hong Kong	16	989	468
Japan	...	...	1,215
Palestine	17	1,594	...
Philippine Islands	32	2,673	2,654
Siam	...	...	158
Syria	...	...	2,215
Turkey	49	3,557	127
Australia	...	...	...
New Zealand	...	...	...
British East Africa	8	904	...
Other South Africa	88	6,854	120
Other British South Africa	3	466	...
Gold Coast	1	...	...
Nigeria	12	870	...
Egypt	10	1,110	...
Algeria and Tunisia	383	28,765	3,243
Other French Africa	4	429	...
Italian Africa	6	499	...
Morocco	151	10,853	2,758
Mozambique	4	469	...
Other Portuguese Africa	1	127	...
Canary Islands	27	2,177	34
Total	6,261	\$379,772	\$243,908
Shipments to Hawaii	221	\$ 22,941	\$ 1,501
Puerto Rico	151	\$ 16,991	\$ 1,424
			\$251,703
			\$ 1,941
			\$ 796

## McCord REFRIGERATION PRODUCTS

Commercial Evaporators  
Domestic Evaporators  
Condensers  
McCord Ice Trays  
Spiral Finned Tubing  
Spiral Copper Finned Iron,  
Steel or Copper Pipe

McCord RADIATOR & MFG. CO.  
DETROIT - MICH.



# BUYER'S GUIDE

MANUFACTURERS SPECIALIZING IN SERVICE  
TO THE REFRIGERATION INDUSTRY

## A NEW FIN COIL by PEERLESS

Wedge-locked and edge-locked aluminum fins on  
tinned copper tubing for methyl chloride, sulphur  
dioxide, F-12, etc.—aluminum tubing for ammonia.  
Absolute Metal to Metal Contact.

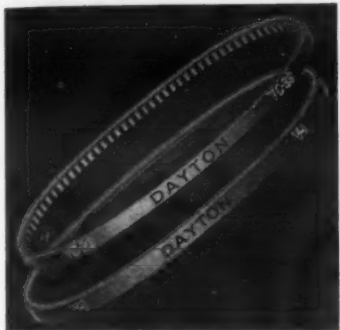
A Superior Coil in which Soldered Return Bends have  
been eliminated.

Priced to meet 1933 conditions.

Write—Wire for Catalog.



PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.



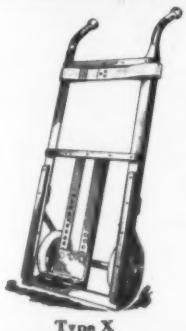
## Dayton V-Belts

For all makes and types of refrigerators.  
There is a stock near you.  
Ask for price list and name of your  
nearest distributor.

THE DAYTON RUBBER MFG. CO.

Dayton, Ohio

The World's Largest Manufacturer of V-Belts



## The Dayton CARRIER Truck

Deliver Your Refrigerators  
on Rubber

Type X has 53 inch Handles and 8  
inch Rubber Wheels. Type Y has 70  
inch Handles, 5 inch Rubber Wheels  
and skids.

Type X with one strap \$16.00

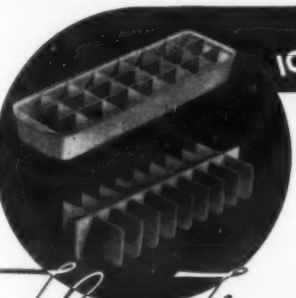
Type Y with one strap \$17.50

f.o.b. Dayton

International Engineering Inc.

Dayton, Ohio

15 Park Row — New York



## ICE CUBES THE MODERN WAY

Flexible rubber trays for all types and  
makes of mechanical refrigerators. Also  
flexible rubber grids for all metal trays.  
See your distributor—the maker of  
the refrigerator you sell—or write for  
money-making facts to The Inland  
Manufacturing Company, Dayton, Ohio.

Flexo Trays • Flexo Grids

W  
A  
C  
O



## BEER PUMP

Oil and Beer do not mix.  
The Waco Beer Pump has no crank  
case filled with oil like the air com-  
pressor—it is an air pump—des-  
igned expressly for dispensing  
clean wholesome air for serving  
beer—it fits in anywhere—write for  
details and territory offerings.

WATER APPLIANCE CO.  
MILWAUKEE

## DETROIT LUBRICATOR COMPANY

TRUMBULL, LINCOLN,  
MARQUETTE & VIADUCT  
DETROIT, MICH.

Manufacturers of "Genuine Detroit" Automatic  
and Thermostatic Expansion Valves, American Cube-  
makers, American Refrigeration Sections, Automatic  
Controls for Temperature and Pressure, Electric Valves  
for Refrigerant and Water Control, Thermostats, Hu-  
midistats and complete controls for Air Conditioning.

Descriptive literature gladly sent upon request

Division of

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

A Thermostatic valve that  
can be installed in any  
position or location—  
and in any temperature.

## ALCO THERMO VALVE

Methyl Chloride — F-12  
Sulphur Dioxide

The control always resides in the  
thermal bulb—even if the body of  
the valve is subjected to a lower  
temperature.

Write for Bulletin 129



ALCO VALVE CO., INC., 2629 Big Bend Blvd., St. Louis, Mo.

New York • Los Angeles • San Francisco • Dallas • Atlanta • Denver



## QUESTIONS

### Imitation Foods

No. 1298 (Dealer, Ohio)—"We desire  
the names and addresses of various  
manufacturers from which we can se-  
cure imitation materials for illustrat-  
ing the various kinds of food, meat,  
etc. We want these for display pur-  
poses inside of electric refrigerators."

Answer—Imitation Food Products  
Co., 107 Lawrence St., Brooklyn, N. Y.;  
Realistic Displays, Inc., 122 Colt St.,  
Irvington, N. J.; and Reproductions  
Co., 210 South St., Boston, Mass.

### Book Publisher

No. 1299 (Export representative,  
New York)—"Can you tell us where  
we can order a copy of 'Household  
Refrigeration' by H. B. Hull?"

Answer—Nickerson & Collins Co.,  
435 N. Waller St., Chicago, Ill.

### Champion Parts

No. 1300 (Dealer, Oklahoma)—"We  
have sold a number of Champion re-  
frigeration machines in the past, and  
find that we are unable to get parts  
for them. Where can we buy Cham-  
pion replacement parts, and Cooke  
seals such as were used on this ma-  
chine?"

Answer—For Champion parts, get in  
touch with the Chicago Refrigeration  
Service Co., 360 E. Grand Ave., Chi-  
cago, Ill.; for Cooke seals—Rotary  
Seal Co., 809 W. Madison St., Chicago,  
Ill.

### Household and Commercial Systems

No. 1301 (Manufacturer, Illinois)—  
"Please send us a list of companies  
which manufacture complete house-  
hold refrigerators and also machines  
that can be sold for commercial pur-  
poses."

Answer—Copeland Products, Inc.,  
Mt. Clemens, Mich.; Frigidaire Corp.,  
Dayton, Ohio; General Electric Co.,  
Electric Refrigeration Dept., Nela  
Park, Cleveland, Ohio; Gibson Electric  
Refrigerator Corp., Greenville, Mich.;  
Ilg Electric Ventilating Co., 2850 N.  
Crawford Ave., Chicago, Ill.; Kelvinator  
Corp., 14250 Plymouth Road, Des-  
troit, Mich.; Liberty Refrigeration  
Corp., 237 Georgia Ave., Providence,  
R. I.; Merchant & Evans Co., 21st &  
Washington Ave., Philadelphia, Pa.;  
Starr Co., Richmond, Ind.; Servel  
Sales, Inc., Evansville, Ind.; Trupar  
Mfg. Co., Dayton, Ohio; Uniflow Mfg.  
Co., Erie, Pa.; Universal Cooler Corp.,  
7424 Melville Ave., Detroit, Mich.;  
Westinghouse Electric & Mfg. Co.,  
Electric Refrigeration Dept., Mans-  
field, Ohio; Zerozone Corp., 205 E. 42nd  
St., New York, N. Y.

### Carrene

No. 1302 (Manufacturer, Missouri)—  
"Will you be good enough to tell us  
where we may purchase small quanti-  
ties of dichlorethylene? As we under-  
stand it, this is the same refrigerant  
commonly known as Carrene."

Answer—Carrier Engineering Corp.,  
850 Frelinghuysen Ave., Newark, N. J.

### Isobutane and Methyl Chloride

No. 1303 (Dealer, Montana)—"Kindly  
advise where I can buy isobutane and  
methyl chloride from reliable sources,  
or forward my name and address to  
them."

Answer—Isobutane is available from  
Carbide & Carbon Chemicals Corp., 30  
E. 42nd St., New York, N. Y., or  
Matheson Co., East Rutherford, N. J.  
Methyl chloride can be secured from  
Matheson Co. or the R. & H. Chemi-  
cals Dept., E. I. duPont de Nemours  
Co., Inc., Wilmington, Del.

### Hand Trucks for Cabinets

No. 1304 (Manufacturer, Ohio)—  
"Have you available a list of com-  
panies manufacturing refrigerator  
handling equipment, including hand-  
operated trucks for moving refrigera-  
tor cabinets?"

Answer—See pages 264 and 265 of  
the REFRIGERATION DIRECTORY and MAR-  
KET DATA BOOK.

### Refrigeration Accessories

No. 1305 (Dealer, South Carolina)—  
"Can you give us the names of jobbers  
handling accessories and replacement  
parts?"

Answer—Replacement parts sup-  
pliers are listed on page 341, and man-  
ufacturers of accessories on page 340  
and 341 of the REFRIGERATION DIRECTORY.

### Door Gaskets

No. 1306 (Dealer, South Carolina)—  
"Where can we buy the weather  
stripping that goes around the door of  
electric refrigerators?"

Answer—Aetna Rubber Co., 4710  
State Road, Ashtabula, Ohio; Jarow  
Products Corp., 143 W. Austin Ave.,  
Chicago, Ill.; Kason Hardware Corp.,  
61 Navy St., Brooklyn, N. Y.; and  
Miller Rubber Products Co., South  
High St., Akron, Ohio. For a com-  
plete list see page 206 of the  
REFRIGERATION DIRECTORY.

### Ice Cube Capacities

No. 1307 (Connecticut)—"Is there an  
electric or gas refrigerator on the  
market that can furnish ice cubes to  
meet an unusual demand for residence

use, or is there some extra attachment  
to provide extra cubes? The usual  
type of refrigerator is too slow to  
freeze the cubes when both trays have  
been used up."

Answer—There is no device now on  
the market which can be installed as  
an accessory to produce extra ice  
cubes. However, there are extra large  
household refrigerators which make  
what would ordinarily be considered  
ample ice for household use. Frigida-  
ire, Kelvinator, and Westinghouse,  
for instance, have models that will  
make from 20 to 24 lbs. of ice cubes  
in one freezing.

There are also refrigerators with  
practically no food storage capacity  
which are designed and built solely  
to furnish ice cubes. They are in-  
tended mainly for restaurant service.  
These resemble household refrigera-  
tors in external appearance, and are  
known as 'ice makers'. Makers of  
such equipment are listed on page 258  
of the REFRIGERATION DIRECTORY.

## FINANCIAL STATEMENT

### General Electric Co.

NEW YORK CITY—Orders received  
by the General Electric Co. in the sec-  
ond quarter of 1933, according to  
President Gerard Swope, amounted to  
\$35,539,858, compared with \$35,304,070  
in the corresponding quarter last year,  
an increase of about 1 per cent.

Orders for the first six months of  
1933 amounted to \$61,051,502, compared  
with \$68,708,712 for the first half of  
1932, a decrease of 11 per cent.

Sales billed for the first six months  
of 1933 amounted to \$61,773,414.19, com-  
pared with \$80,210,489.15 for the cor-  
responding period last year, a decrease  
of 23 per cent.

Profit available for common stock  
for the second quarter of 1933 was  
\$2,471,030.95, equivalent to 9 cents per  
share, or slightly less than the quar-  
terly dividend of 10 cents per share to  
be paid on July 25.

The profit available for common  
stock for the first six months of this  
year was \$4,666,080.69, compared with  
\$7,653,187.61 for the first six months of  
last year. This profit is equivalent to  
16 cents per share for the first six  
months of 1933 and 27 cents per share  
for the first six months of 1932.

## NEW FIRM WILL HANDLE SALE OF KULAIR PRODUCTS

PHILADELPHIA—Kulair Products  
Corp. has been organized at 2415  
Chestnut St. here to take over the  
records, etc. of the bankrupt Kulair  
Corp., and is now supplying parts for  
compressors formerly sold by the old  
organization, as well as distributing  
new condensing units bearing the  
Kulair trade name.

Directors of the new organization  
are Horace Roberts and Byron T.  
Roberts of Moorestown, N. J., and W.  
W. Moss of Philadelphia. Mr. Moss is  
president and treasurer, Mr. Horace  
Roberts is vice president, and L. Mac-  
Farland is secretary.

The company will specialize in com-  
mercial units ranging in capacity from  
1/4 to 3 hp., but is neither manufactur-  
ing nor having manufactured under its  
own name any type of household units,  
although it does wholesale domestic  
units manufactured by other firms.

Kulair's line of commercial units in-  
cludes 14 conventional type, 1-, 2-, and  
3-cylinder reciprocating compressors,  
seven of which have water-cooled con-  
densers, while the other seven have  
condensers of the air-cooled type.

## World's Fair Trip Is Goal for Salesmen

PHILADELPHIA—A trip to and  
from Chicago, with three days at A  
Century of Progress comprise the  
award which quota-busting dealers  
and salesmen of Trilling & Montague,  
Norge distributor here, will receive at  
the close of a sales contest which  
opened July 5 and will close Aug. 26.  
The outing will start Sept. 2, and the  
winners will return Sept. 6. The dis-  
tributor will pay all expenses. Each  
sale of a Norge refrigerator, or any  
other appliance distributed by Trilling  
& Montague, entitles a dealer or sales-  
man to a specified number of "miles."  
When 1,600 miles have been accumu-  
lated, the dealer or salesman is eligible  
for the trip.

After passing the 1,600-mile mark,  
the sale of any appliance entitles the  
seller to double the credit originally  
allowed for that appliance, and when  
a man has made another 1,600 miles,  
he will be permitted to take a com-  
panion on the trip.

## KANSAS DEALER SELLS 25 UNITS IN 25 DAYS

MCPHERSON, Kan.—E. L. Wolf,  
plumber and Leonard refrigerator  
dealer here, recently set a new record  
for his organization by making 25  
Leonard electric refrigerator sales in  
25 days in this town of 5,000 population.

## CLASSIFIED

PAYMENT in advance is required for  
advertising in this column.

RATES: Fifty words or less, one inser-  
tion \$2.00, additional words four cents  
each. Three insertions \$5.00, additional  
words ten cents each.

REPLIES to advertisements with box  
numbers should be addressed to the box  
number in care of Electric Refrigeration  
News, 550 Maccahees Bldg., Detroit, Mich.

### POSITIONS AVAILABLE

WANTED—Refrigerating engineers to sell  
Fin Coils on salary and commission.  
Rempe Co., 340 N. Sacramento Blvd.,  
Chicago, Ill. Kedzie 0483.

### POSITIONS WANTED

CONNECTION with manufacturer or dis-  
tributor of Air Conditioning or Commer-  
cial Refrigeration Equipment wanted by  
man now employed as service manager for  
a distributor of Kelvinator. Seven years'  
experience on domestic and commercial  
service and installation work. Willing to  
start at the bottom and for a small salary.  
Best of references including present em-  
ployer's. Address Box 580.

### FOR SALE

HERMETICALLY SEALED HOUSEHOLD  
REFRIGERATOR DESIGN—Has many  
new features. Simple, efficient and a good  
practical manufacturing proposition. A  
thoroughly proven rotary compressor.  
Patents pending. Inquiries are solicited  
from companies now manufacturing non-  
hermetic refrigerators or those consider-  
ing entering the refrigeration field. Box  
573.

### INDEPENDENT SERVICE COMPANIES

HALECTRIC Thermostat repair service,  
Ranco, B & B, Two dollars each, one year  
guarantee, prompt service. Halectric Lab-  
oratory, 1793 Lakeview Road, Cleveland,  
Ohio.

## OPENINGS for 12 MEN

## Experienced in Commercial Refrigeration

A solidly established manufacturer  
will consider applications for the  
following positions:

- 3 Field Representatives—with  
knowledge of commercial refrig-  
eration, with broad business ex-  
perience and ability to set up out-  
lets on a basis that will put such  
outlets on the road to success.  
Sales experience will be necessary  
but these jobs require much more  
than an ability to secure initial  
orders.
- 7 Sales Engineers—for home office  
and field work. These men must  
have technical training in refrig-  
eration plus practical experience  
in the application of refrigeration  
equipment to commercial prob-  
lems.
- 2 Sales Engineers—with experience  
as writers. These men must com-  
bine the ability and experience  
outlined above with experience  
and a proved ability in the com-  
piling and preparation of engi-  
neering data.

### also

A number of openings for sales  
engineers with organizations al-  
ready acting as outlets in various  
parts of the United States.

In answering this advertisement please  
observe the following requests:

- a. State for which of the above  
positions you are applying.
- b. Give details of your training and  
experience, chronologically.
- c. Give references as to character,  
ability and past performance.
- d. Enclose photograph. A snapshot  
will suffice but without a photo-  
graph of some kind enclosed no  
application will be considered.  
Photographs will not be returned.
- e. State salaries earned in the past.
- f. State salary now required. Please  
cover this matter definitely and  
thoughtfully in first letter as a  
figure too high—or too low—will  
prevent further consideration. We  
realize that capable men are will-  
ing to postpone salary adjust-  
ments until their worth is proved,  
but in this case, we must ask for  
a definite figure as to salary  
requirements.

Address Box 579

ELECTRIC  
REFRIGERATION NEWS



## NEMA CODE REVISED IN OPEN HEARINGS

(Concluded from Page 1, Column 5)  
is to be made effective Sept. 1, but the provision as regards factory workers becomes effective as soon as the code takes effect.

In keeping with the President's request that industry raise wages generally, the code requires the industry to report, not later than 90 days after the code becomes effective, adjustments in all wages above the minimum scale.

The code provides that no employer shall sell or exchange any product of his manufacture at a price or upon such terms or conditions that will result in the customer paying for the goods received less than the cost to the seller, determined in accordance with the uniform and standard method of costing which is set forth in another provision of the code, provided, however, that dropped lines, seconds, or inventories which must be converted into cash to meet emergency needs may be disposed of in such manner and on such conditions as the supervisory agency may approve.

However, if provision is made in supplemental codes prepared for any branch or division of the industry for selling below cost in order to meet existing competition on products of equivalent design, character, quality, or specifications, such practices shall not be deemed a violation of the code.

The Vacuum Cleaner Manufacturers Association, the Independent Lamp Manufacturers Association, the Radio Manufacturers' Association, and the Washing Machine Manufacturers' Association objected to being included in the general code because of peculiar conditions within their own industries. These groups told Deputy Administrator Allen that they felt they could operate better with individual codes and most of them declared that their industries were working hard preparing codes.

### May Be Exempted

Because of these objections a clause was inserted in article 1 of the code to the effect that "organizations or groups of employers representing a substantial part of any branch or subdivision of the industry may be exempted by the administrator from the provisions of this code."

Deputy Administrator Allen urged that divergent elements within the industry try to compose their differences of opinion so that one plan of control could be created for the entire electrical manufacturing field.

There was some indication that the branches or subdivisions might be governed by the general code only as regards hours and wages, and that the administration might accept codes from such branches or subdivisions governing the trade practices peculiar to each industry.

C. D. Jackson, representing Electrolux Refrigerator Sales, Inc., protested the inclusion of the gas refrigerator manufacturers under the code, as he pointed out that the Gas Association was preparing a code which would govern manufacturers of gas appliances. Because of this, specific refer-

## Welding Evaporators



Worker in the Mansfield plant of Westinghouse gas-welding an evaporator for one of Westinghouse's new 'Master Series' refrigerators.

ence to the inclusion of manufacturers of absorption type refrigerators was eliminated from the code.

Representatives of some of the subdivisions also objected to being included in the Nema code on the grounds that they would be forced to submit figures showing their operating costs and other information which they did not want to get into the hands of competitors or customers.

This objection was composed by changing the wording of the article relating to compilation of statistical data so that all statistics, data, and information shall be revealed only to duly authorized representatives of the Board of Governors or Executive Committee of Nema, such representatives not to be in the employ of any employer affected by the code.

Gerard Swope, president of the General Electric Co., acted as industrial adviser to Mr. Allen and William Green, president of the American Federation of Labor, acted as his labor adviser at the hearings.

George W. Mason, president of Kelvinator Corp., presented the industry's reasons for proposing the 144 additional-hour plan for seasonal peaks which was included in the proposed code. Mr. Mason backed up his proposal with figures showing the 3-year average of the industry's volume of

business by quarters.

This proposal was attacked by Mr. Green, who declared that it is up to industry to "plan better" in the future.

"We can anticipate the merchants' and buyers' needs, and particularly in dealing with standardized production we can so adjust the working time to the number of work days per year and the labor force so as to produce in anticipation of seasonal demands, and thus avoid the employment of these people 144 extra hours per year," the head of the American Federation of Labor declared.

Deputy Administrator Allen declared that some manufacturers have been carrying inventories and supplying customers by express so that the customer can operate on one or two days' inventory, "an absolutely impracticable thing under normal conditions."

"We are now in a situation where the customer must adjust himself to a more stabilized condition," he said. "I think it would be well if customers could be prevailed upon to anticipate their requirements."

Mr. Allen pointed out, however, that such highly seasonal industries as that of electric refrigeration constituted a special problem.

The 36-hour week was attacked by Mr. Green, who declared that it would create no more jobs than those existing at present.

"The code actually sets a work week longer than the average hours now being worked in the industry. In May the average hours worked were 34 per week and nearly 200,000 persons were out of work who were attached to the electrical industry in 1929."

Mr. Allen interposed at this point as follows:

"I would like to call attention to a few facts. In the first place, figures presented indicate that the electrical industry, or about 70 per cent of it, is far from being one of profit. We must be mindful of the fact that no matter what rate of wages they pay, that industry cannot be expected to do much until it has some chance of getting a volume of business which would enable it to get its people re-employed."

"It is reported here that if this industry can get a volume of business which will result in operations at 60 per cent of the 1929 capacity, it will re-employ 25,000 men in excess of the maximum number of men employed in the industry at its maximum peak period."

The Electrical Workers Union, in a brief subscribed to by the other labor groups, proposed that "The minimum weekly scale for skilled electrical workers shall be 90 cents an hour and that existing piece rates be increased accordingly, that the maximum hour schedule shall not be more than 30 hours a week; that an investigation be made of the bonus incentive plan, the Bedaux system, the micro-motion system to measure their effect on production."

As originally submitted the code provides that the minimum wages should apply only to employees in cities of 200,000 population and over. Labor leaders pointed out that this would except such cities as Schenectady, West Lynn, Mass., and other cities in which General Electric and Westinghouse had factories. As a result, this provision was eliminated in the revised code.

## Circuit Court Upholds duPont Patent On Low Viscosity Lacquers

(Concluded from Page 1, Column 1)  
what is desired, else the operation must be more often repeated.

"On the other hand, the greater the proportion of nitro-cellulose in the solution, the more viscous it is, and the harder to spray or brush. The optimum is therefore that solution which will contain most nitro-cellulose and remain most fluid . . .

" . . . To achieve a thick coating and keep the solution fluid enough for use, it was essential to produce a nitro-cellulose of low 'viscosity characteristic,' and undoubtedly the art would have welcomed such a lacquer before Flaherty's time; indeed, it had tried to find one. It would thicken each covering and avoid several additional coats.

"Various processes were known long before the invention by which the viscosity of nitro-cellulose could be reduced . . . However, as the viscosity is reduced, though the lacquered object will be covered more thickly, the coating becomes brittle . . . Oils and other softeners prevent this by making it tough; resins make it stick, though they counteract the action of the softeners . . .

" . . . The patent did not pretend to rely upon any of these discoveries, and could not. It gave a recipe for reducing viscosity, and for oils and resins, but laid no claim to it or any part of it. It claimed no more than that to produce an effective lacquer of thick coating quality, the viscosity characteristic of the nitro-cellulose must be below a critical limit fixed in the claims . . .

"Perhaps Flaherty intended . . . to fix a lower limit of viscosity, but the language is obscure . . . However that may be, he did indicate very clearly in his specifications that the viscosity should not be too low . . .

" . . . Upon appearance of the patented lacquer under its trade-name Viscolac, the art very generally followed suit . . . Flaherty's work was done in 1920, shortly after the close of the Great War, and at a time when vast stocks of nitro-cellulose were on hand . . .

" . . . In 1913, and thus before the war, Doerflinger, a competent chemist, who later went to the Perry Austen Co., began to work upon low viscosity lacquers . . . His nearest approach to anything within Flaherty's limits was his formula 415 . . . This new lacquer appeared and was passed to its customers without comment from them . . .

" . . . When in 1921 Viscolac appeared, it at once commanded the attention of the whole art as something radically new and desirable . . . So far as we can see, nothing except the knowledge that viscosity must be kept below Flaherty's limit determined the success of the new product . . .

" . . . Our conclusion is borne out by the other evidence. One Bacon was a chemist in the employ of the Atlas Co., a large and powerful producer of lacquers. In 1919 this company wished to secure a lacquer of low viscosity, and charged Bacon to develop it . . . In December, 1920, he had

developed a lacquer of very low viscosity . . . but still found that it was too thin . . .

" . . . In any event, it appeared in January, 1921, and after Flaherty had developed his own lacquer. Indeed, Flaherty's first sale was in January, 1921, following trial deliveries in December . . .

" . . . The Atlas Co. itself was explicit as to this. In its report of April, 1922, it said that 'to obtain such a finish in one or two coats with material thinned with an equal amount of thinner had been unheard of in lacquer finishes until Viscolac came on the market' . . .

" . . . True, all that Flaherty did was to carry out what was already known, and by trial and error fix the limit which should be observed. If genius is demanded, surely he was no inventor; rather he was one of those who, taking the knowledge at hand, worked out its implications in the laboratory . . .

" . . . The learned district judge particularly relied upon DeForest Co. v. General Electric Co., 283 U.S. 664, and so does the defendant. That was a case which superficially somewhat resembled the case at bar . . . We do not think that upon close scrutiny it does so far as it appears.

"Langmuir had utilized the current knowledge of the art in 1913, to claim as his invention the exhaustion of occluded gases in a vacuum bulb, by which he reduced its ionization point in use. It was known that the phenomenon of ionization . . . made it unsteady and demanded nice adjustment for each bulb . . .

" . . . At the time when Langmuir disclosed his invention, which was merely for a completely exhausted bulb, there was no demand for anything of the sort; the art did not yet need it. Thus Langmuir had merely put in practical form . . . the scientific discoveries of others . . .

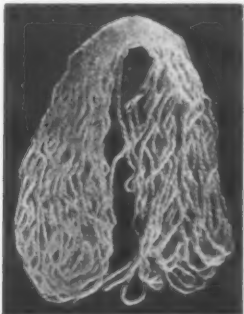
" . . . Therefore, we are disposed to regard Flaherty's work in this case as invention. From him dated in fact a contribution whose value cannot be denied; to him must be attributed the first practicable low viscosity lacquers whose desirability had been known long enough to make them the subject of much experiment . . .

" . . . Moreover, the patent has been recognized by 52 manufacturers who have taken licenses. True, this must not be pressed too far; it is easier to pay tribute than to fight, and a substantial part of the trade has combined in this contest. But courts have always treated such recognition as a relevant consideration."

### NEW DISTRIBUTOR NAMED

CHICAGO—Alemite Co. of Missouri in Kansas City, and the Phillips & Buttorff Mfg. Co., Nashville, Tenn., have been franchised as distributors of Stewart-Warner refrigerators, according to Charles R. D'Olive, refrigeration sales manager of the Stewart-Warner Corp.

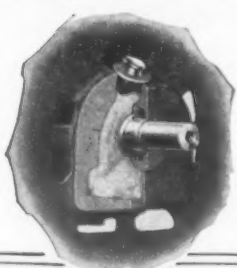
## Century WOOL YARN SYSTEM OF LUBRICATION



Continuous, Unbroken Strands of Pure Wool Yarn Used in the Century Wool Yarn System of Lubrication.



Century 1/6 Horse Power Type RS Single Phase Motor



Cut-a-Way View Showing Century Wool Yarn System of Lubrication

## ONE YEAR'S Continuous Operation WITHOUT RE-OILING

Continuous, proper motor lubrication is a most important design, operating and sales factor in motor driven apparatus—particularly such frequently neglected equipment as oil burners, electric refrigerators, pumps and similar household and commercial appliances.

Century assures both manufacturer and customer satisfaction by furnishing as standard equipment on all 1 horse power and smaller motors, the Century Wool Yarn System of Lubrication—which provides one year's continuous 24 hour per day operation, without re-oiling.

This again illustrates a feature of Century's correlated design which is so desirable where motors must "Keep-a-Running" with little or no attention.

## Century MOTORS

CENTURY ELECTRIC COMPANY  
1806 Pine Street St. Louis, Mo.  
Offices and Stock Points in Principal Cities

Century Motors are built in Alternating and Direct Current, Single Phase, Polyphase, Split Phase, Multispeed and Special Motors, ranging in size—depending on type—from 1/250 to 600 horse power. Also Motor Generator Sets, Rotary Converters and Fans.

**BUILT RIGHT TO STAY TIGHT**

# SEEPAGE PROOF

**PIPE AND TUBE FITTINGS**

**NEVER LET GO!**

When a job is completed with Commonwealth Brass Fittings the manufacturer, dealer, or installer can be sure that, for the life of the job, Commonwealth fittings will give 100% service.

Accidents may happen, of course, but inasmuch as these fittings are seepage proof, the threads accurately cut to No. 2, S. A. E. fit and every tube seat protected from nicks, marks or scratches, the fittings (barring abuse) will never let go.

Good fittings are imperative to satisfactory installations. Trust Commonwealth as your source of supply. 25 years experience in this industry amply qualifies them to serve you.

Catalog No. 36  
Furnished on request

## COMMONWEALTH BRASS CORPORATION

COMMONWEALTH AVE. AND G.T.R.R.  
**DETROIT**



# A Century of Progress Supplement

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC

IN TWO PARTS—PART TWO

# REFRIGERATION NEWS

Registered U. S. Patent Office

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS.

VOL. 9, No. 13, SERIAL NO. 227  
ISSUED EVERY WEEK

Copyright, 1933, by  
Business News Pub. Co.

DETROIT, MICHIGAN, JULY 26, 1933

Entered as second-class  
matter Aug. 1, 1927

THREE DOLLARS PER YEAR  
TEN CENTS PER COPY



A group of interested spectators stop in front of the Frigidaire beer cooling exhibit to listen to a demonstration.

E. G. Biechler (below), president of Frigidaire Corp., stands proudly beside a chrome-plated model of the new Frigidaire 10-ton compressor, which is used for air conditioning.



There's always a crowd around this Frigidaire exhibit in the General Motors building, in which water is boiled on ice. High frequency current passes through the frost-covered coil and asbestos mat to heat the water.



Dominating the southern end of A Century of Progress exposition, the General Motors building is easily the outstanding exhibition of the products of one corporation housed in a single building at the Fair. At night its orange hues and brilliant lighting make it a gorgeous etching against the sky. Sparkling "G. M." signs on four sides of the tower are visible for miles.





In the Abraham Lincoln group, shown in the airplane view above, appear reproductions of the Great Emancipator's birthplace, his early home in Indiana, the Lincoln-Berry store where he clerked and studied Blackstone, and the Wigwam at Chicago, in which he was nominated for the Presidency of the United States. At the extreme left of the group is a reproduction of the Rutledge tavern where he met and wooed Ann Rutledge. The affable host at the Lincoln group is Judge Charles Edward Bull (left) who is known as "the living Lincoln."



The Laughing Buddha, which guards the entrance to the Golden Pavilion of Jehol at A Century of Progress, is carved from a solid piece of wood, gilded and lacquered.



Vesta Collbath (above left) and Gladys Curtin, two models in Mrs. Ford Carter's fashion show, test the effectiveness of a Frigidaire air conditioner.

Jack Benny refreshes himself with a bottle of cold beer which his wife, and radio playmate, Mary Livingston pours for him. Jack had just signed a General Motors radio contract when this picture was snapped.



The staff which is manning the Frigidaire exhibit at A Century of Progress exposition greets visitors and demonstrates Frigidaires, and commercial, beer cooling, and air-conditioning equipment. They are: Front row, kneeling, left to right, C. D. Studinger, A. M. Rohr, Arthur Yensen, and E. F. Tinnerman. Second row, standing, J. C. Coffey, manager of exhibit; J. B. Nahstoll, C. M. Billman, Carl Lohman, R. C. Wright, R. P. Weems, and L. H. Fairbairn. Back row, left to right, L. H. Kleinans, C. S. Kennedy, W. S. Zahrt, J. D. Borland, and F. J. Cejda. Jean Adaire, home economist, also is at the Fair for Frigidaire, but is not in this picture.

Atten-shun! Present: order blanks! The Frigidaire sales staff on duty at their exhibit in the General Motors building lines up for inspection to start a new day.

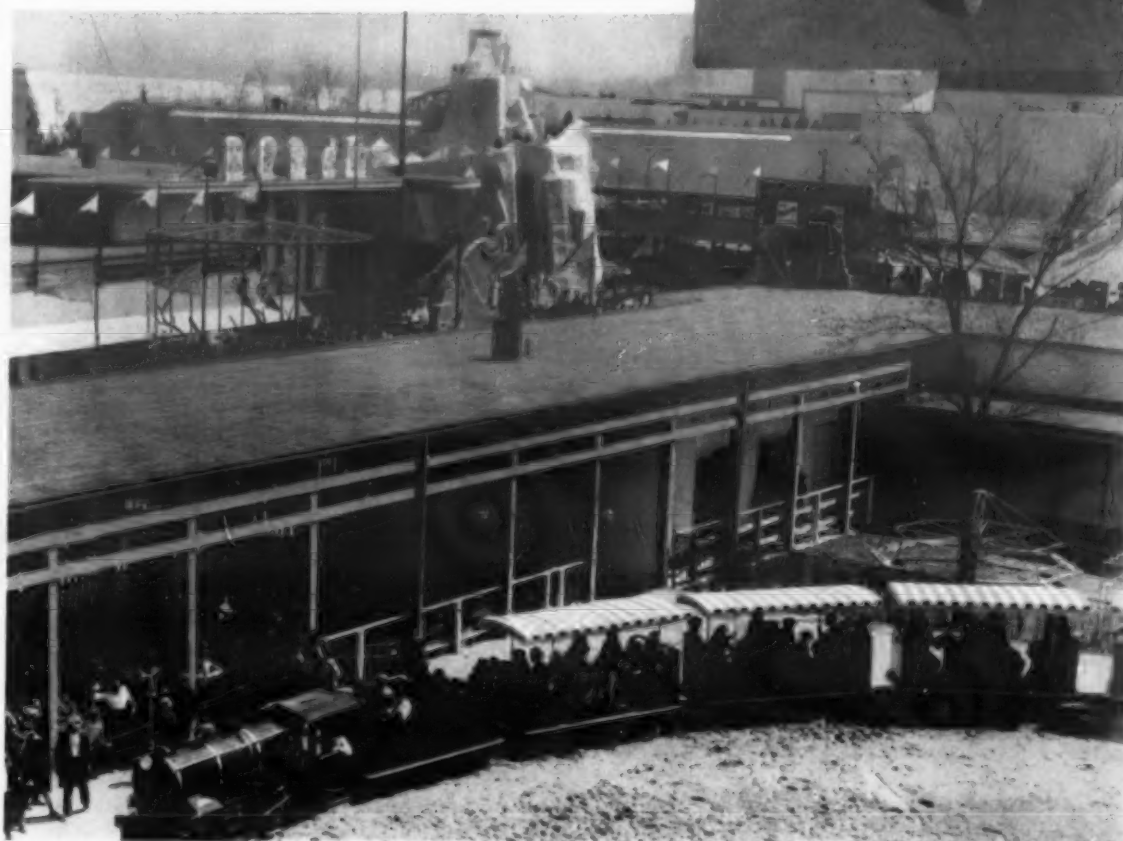


Foot fatigue is the most prevalent malady at the Fair. One way of avoiding it is the use of wheel chairs (right).



Perhaps the most modernistic drug store in America is the Walgreen unit (pictured above) at A Century of Progress. Seven Frigidaire beer coolers are used in the Walgreen stores at the Fair to provide cool beverages.

Enchanted Island, five-acre playground for children who visit the Fair, may be glimpsed at the right. In the foreground is the miniature train which journeys over the isle.





# Take a Look at the

## THE NEW FRIGIDAIRE LINE

*Shatters all previous sales records. Fills the world's largest refrigerator factory with an ever mounting flood of orders. Puts thousands back to work on a full time basis. Marks the greatest public acceptance ever accorded a new Frigidaire Line.*

Leave it to Frigidaire and General Motors to produce a winner! And what a winner the 1933 line is. Not a winner that wins by a nose, but one that sets new all-time records.

More Frigidaires for household use were built and shipped in June of 1933 than in any single month in the past seventeen years.

And today the world's largest refrigerator factory is operating at top speed to keep pace with the thousands upon thousands of Frigidaire orders that are pouring in from every corner of the country.

It takes a good refrigerator to win such overwhelming popularity. And the new Frigidaire *IS* a good refrigerator. The 1933 line is the finest ever built. And America is quick to sense it—quick to investigate—quick to buy.

Read the facts below—facts that show why Frigidaire is the winner again this year. Note a few of the reasons that have made Frigidaire the choice of a million more people than have bought any other make. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.

No wonder Frigidaire is the choice of a million more buyers than any other make

### NOTE THESE FEATURES.



**THE NEW FRIGIDAIRE USES LESS CURRENT THAN ONE ORDINARY LAMP BULB**—Frigidaire engineers developed a revolutionary new principle. They spent years in testing and perfecting it. Now in the Standard Series Frigidaires there's a mechanism that operates with the merest trickle of electricity. It actually uses less current than one ordinary lamp bulb. A Winner.

**ICE TRAYS CAN'T STICK IN THE NEW FRIGIDAIRE**—You don't have to pull and tug to get ice trays out of the new Frigidaire. Every tray has a patented device that automatically releases the tray at the touch of a finger. Trays always slide out quickly and easily. A Winner.



**GIANT HYDRATORS—PLENTY OF ROOM FOR EVERYTHING**—The Frigidaire Hydrator keeps fruits and vegetables crisp and garden fresh. This invention proved so useful that this year Frigidaire has doubled the Hydrator capacity. A Winner.



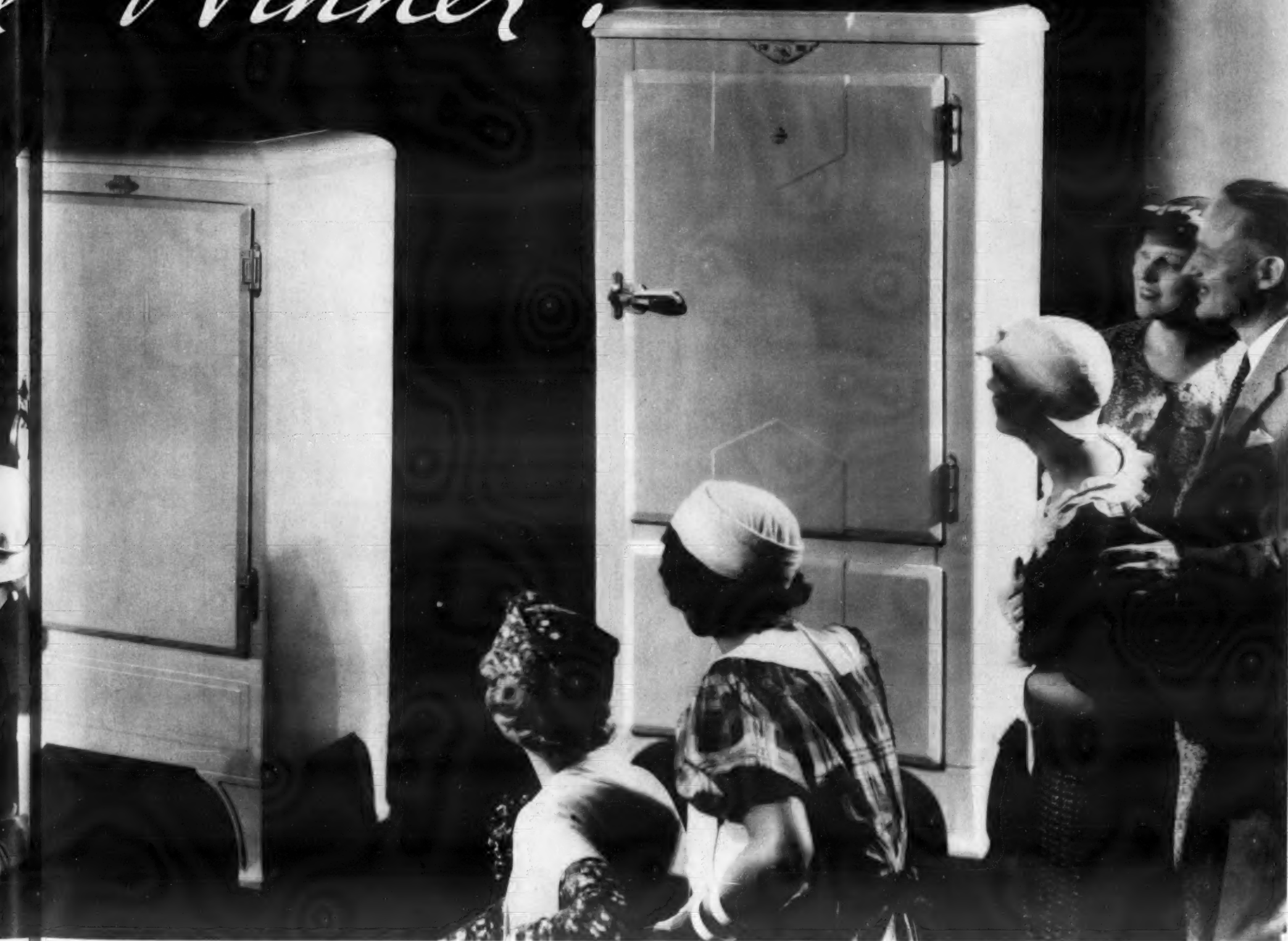
**THE NEW SUPER SERIES FRIGIDAIRE**—Six de luxe models, new design, light. Automatic defrosting. Automatic ice tray release. More space. Door

FRIGIDAIRE IS ALSO THE LARGEST MANUFACTURER OF COMMERCIAL REFRIGERATION EQUIPMENT TO MEET THE SPECIFIC NEEDS OF STORES, APARTMENTS, RESTAURANTS, HOTELS, AND INSTITUTIONS... WATER COOLERS... AM CAR

PRINT IN BINDI

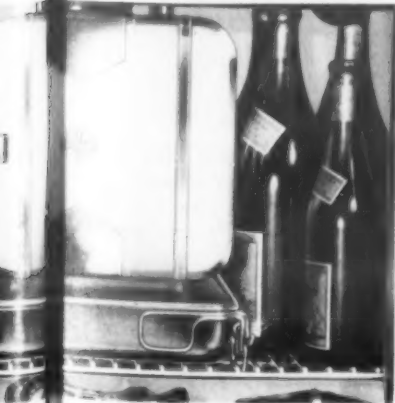


# Winner!



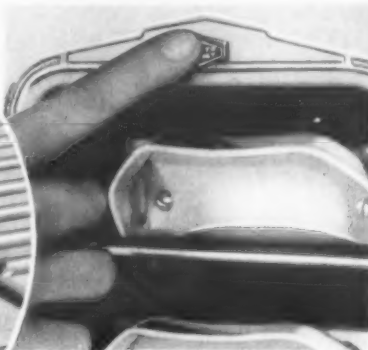
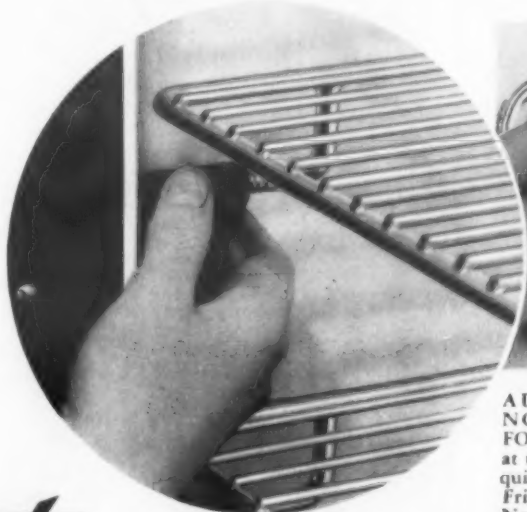
model new design with Lifetime Porcelain inside and out. Interior  
Double Hydrator capacity. New low prices. A Winner.

THE NEW STANDARD SERIES FRIGIDAIRE—Nothing like it known before. Uses less current than one ordinary lamp bulb. New Dulux finish with stainless porcelain interior. Automatic defrosting. Automatic ice tray release. Cold storage space. One-fourth more food space. A Winner.

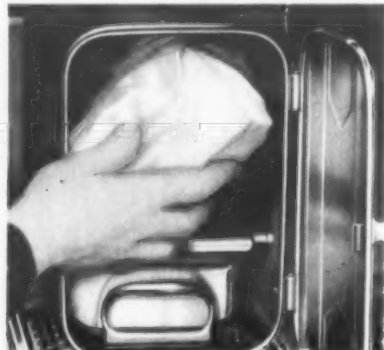


**PATENTED FREEZER PLACED IN CENTER FOR GREATER CONVENIENCE**—This gives you room on *both sides* for food and beverages. Fruit juices can't harm this stainless porcelain interior. Rounded corners make cleaning easy. And remember—*one-fourth more food space*. A Winner.

**MOVE SHELVES UP OR DOWN TO SUIT YOUR CONVENIENCE**—Old style refrigerators have shelves you can't move. The new Frigidaire has *movable* shelves. Thus, if you have a watermelon, for instance, or a turkey, simply adjust shelves to make room for it. A Winner.



**AUTOMATIC DEFROSTING—NOTHING TO REMEMBER OR FORGET**—Just press a button located at the top of the freezer. The frost melts quickly. And then—*automatically*—your Frigidaire begins normal operation again. Nothing to remember. Nothing to forget. Saves time and trouble. A Winner.



**KEEP MEAT OR ICE CREAM FROZEN INDEFINITELY**—A real cold storage compartment. Just remove the upper trays from the freezer and there you are—a cold storage space where you can keep meat, fowl, ice cream or anything else until you're ready to use it. A Winner.

## the new Frigidaire

WINNER AGAIN IN 1933 •

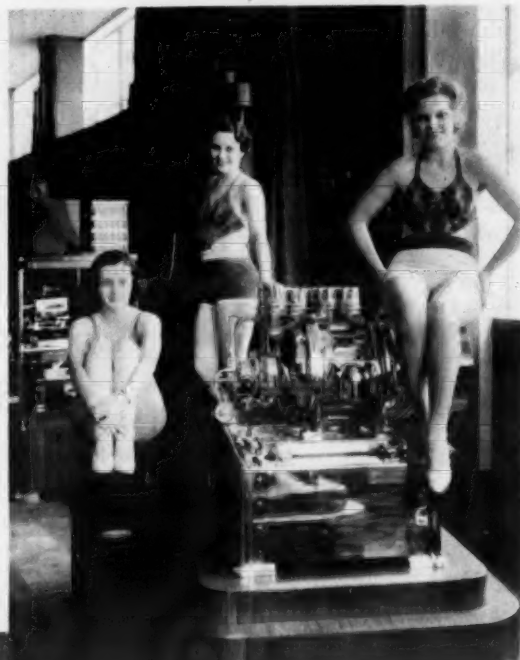
REF. CABINETS . . . MILK COOLING EQUIPMENT . . . AIR CONDITIONING EQUIPMENT FOR HOMES, STORES AND OFFICES. ALSO HEAVY DUTY AIR CONDITIONING AND REFRIGERATING EQUIPMENT FOR LARGE INSTALLATIONS





Mary Lou Forbrich, blond co-ed from the University of Chicago, was the 500,000th visitor to the Frigidaire exhibit at A Century of Progress. The half-million attendance mark was clocked at the entrance to the exhibit in the General Motor building Sunday, June 19. James A. Grier, resident manager for General Motors Corp., chats with Mary Lou as she sits on a Cadillac sedan. On July 3, the 1,000,000th visitor passed through the building.

The first electric refrigerator sold on the grounds of A Century of Progress was a super-73 Frigidaire. Florence Pedley (below), University of Chicago matriculant who may be seen daily on duty (don't miss her—she's a treat for tired eyes) at the Flexotray exhibit of the Inland Mfg. Co. in the G-M building, congratulates W. S. Zahrt, Frigidaire salesman, who got the name on the dotted line.



Grace Schondorf, Ann Miller, and Lorena Morenus, Jantzen bathing beauties, disport themselves in the Frigidaire exhibit during an off-duty hour. The cameraman had difficulty holding steady for this photograph.

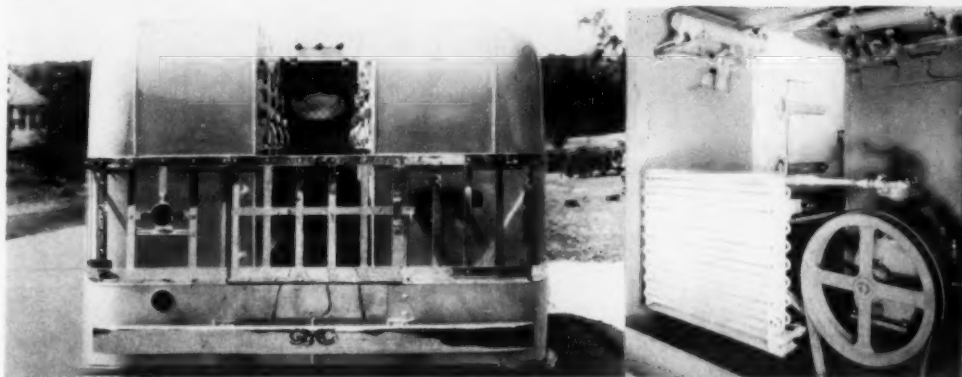


Gigantic replicas of the prehistoric dinosaurs who roamed the earth before the days of man rumble and move ponderously in the popular Sinclair Oil exhibit at the Fair. Above is the beast who guards the exhibit's entrance.



Most visitors to A Century of Progress exposition, the 1933 World's Fair now being held in Chicago, agree that the most interesting exhibit on the grounds is the Chevrolet assembly line in the G-M building. Here Chevrolet motor cars are completely assembled by line production methods before the eyes of spectators. Guests of the Fair have been buying these automobiles and driving them home as fast as they come off the end of the line. The Frigidaire exhibit flanks the production line.



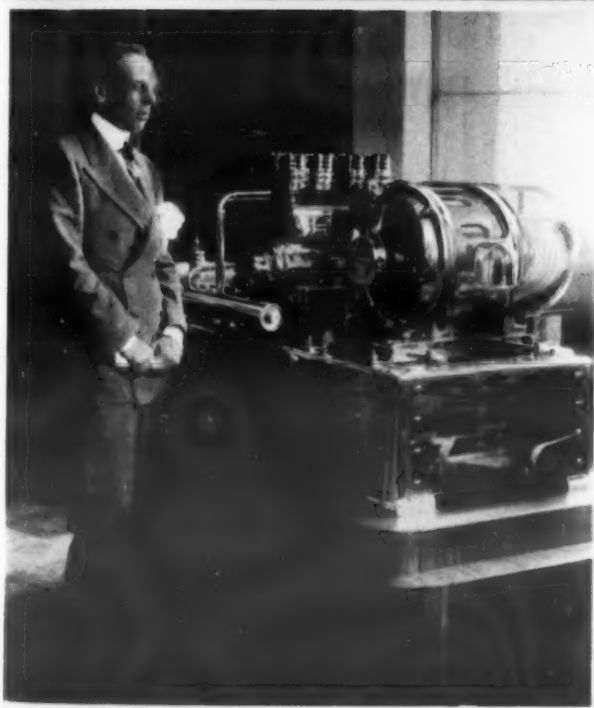


This modernistic General Motors truck, completely refrigerated by Frigidaire, is in daily service at A Century of Progress, delivering ice cream from the Hydrox factory to the Fair grounds. At the right is the truck itself, while above are photographs of its unique rear construction, and of the Frigidaire refrigerating unit.

Designed by Gaston Lachaise, this bas relief guards the west entrance to Communications Hall. The 24-ft. figure is the Genius of Electrical Communication.



Porcelain enameled on a frameless steel type of construction, the Armco-Ferro house shown above is one of a group of modernistic houses at the Fair. Cost of this seven-room coral-shaded porcelain home is less than \$5,000.



Alfred P. Sloan, Jr., president of General Motors Corp., contemplates the craftsmanship of the Frigidaire engineers who built this 10-ton compressor for air conditioning. It is the biggest machine in the Frigidaire line.

Arts and handicrafts exhibits, fashioned with meticulous care and the skill which is derived from generations of handed-down technique, make Swedish building (lower left) well worth a visit.



From Jantzen's bathing beach came these four water babies (we'll take the one in the upper right corner) to see another neat job, the new Frigidaire perform under water.